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HEALTH STATUS OF WOMEN CASHEW WORKERS IN KERALA

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MESSAGE

It is with great pleasure that we announce the publication of the report 'Health Status of Women Cashew Workers in Kerala'. Kerala Institute of Labour and Employment (KILE) is determined to be more socially relevant and visible and is taking special care to disseminate the findings of research studies.

It is estimated that nearly three lakh workers are employed in the cashew processing industry of Kerala. The state of Kerala has one of the highest proportions of cashew workers in India. It is a highly labour-intensive industry and has a long history of employing a large number of workers, especially women. A unique feature of the cashew industry of the state is the fact that an overwhelming majority of workers employed in the sector are belonging to the economically and socially disadvantaged groups of the society.

The working conditions of cashew workers have drawn the attention of researchers, NGOs and Government policymakers as an issue of serious concern. Women working in the cashew sector are facing so many difficulties which affect their lives, ranging from health hazards to lack of adequate social protection. It is important that the status of cashew women workers be carefully considered and rigorously analyzed for making relevant policy measures to improve their lives and health.

Chairman

KILE

ACKNOWLEDGEMENT

Kerala Institute of Labour & Employment (KILE) conducted a research study titled 'Health Status of Women Cashew Workers in Kerala' to explore the health concerns among women workers employed in the cashew processing industry of the state. I wish to express my heartfelt and deep sense of gratitude to the Government of Kerala for giving us the opportunity to work on this project and for providing us with financial assistance. I would also like to express our gratitude to the Hon'ble Minister of State for Labour and Skills for entrusting this important assignment to the Kerala Institute of Labour & Employment (KILE).

I would like to express my sincere gratitude to the Executive Council of KILE, Technical Advisory Committee Members of the project, Dr. G. K. Mini and the Research Team of KILE for their sincere association with this study. I received admirable support from a large number of stakeholders and institutions during the preparation of this report. We are immensely grateful to all those who spared their valuable time to respond to our interviews and questions during the primary survey. I express my sincere appreciation to Field Investigators and the Data Entry Operators for their meticulous work. Special thanks to all the trade union leaders, health professionals, stakeholders and owners/managers of factories for their constructive recommendations and valuable support on this project, especially during in-depth interviews. I would also like to express my appreciation to the Administrative staff of Kerala Institute of Labour and Employment, who were associated with the study, for undertaking the required professional tasks in an efficient manner.

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EXECUTIVE SUMMARY

1. Background

The cashew nut processing industry is one of the leading agricultural industries in India, and Kerala stands fifth in the country in the quantity of production and sixth in the area of cultivation (Kerala Cashew board Ltd, 2021). This labour-intensive industry, with a long history of employing a significant number of women workers, has been facing a growing crisis since the past four or five years, that has been aggravated by the pandemic and the subsequent lockdown (Deccan Chronicle, 2018; KNN, 2018; DownTo Earth, 2018). A significant proportion of factories in Kollam, which has been the hub of the industry in the state, has closed down and many are shifting their base to other states. This has direct consequences for the employment and livelihoods of at least three lakh women workers in the state.

The physical, chemical, biological, ergonomic, and psychological exposures associated with working in this industry and the impact that it exerts on the health and quality of life of workers has been studied in the literature. Several occupational health concerns, particularly musculoskeletal problems, respiratory problems, allergies and dermatological problems, have been reported. However, there has been little research into the specific pathways through which gender intersects with other determinants like poverty, caste, poor educational background, and precarious employment to further aggravate the vulnerabilities and consequently affect the health of these women workers. Thus, this exploratory mixed-methods study aims to assess the health status of women cashew workers in the Kerala state of India and explore the impact of their living and working conditions on their health.

2. Conceptual framework

We have used the theoretical framework proposed by the Employment Conditions Knowledge Network (EMCONET), to explore the complex relationships among employers, government and workers' organizations, labour market, social policies, employment & working conditions of workers. The framework also explores the relationship between these factors and the health and well-being of workers. According to this model, both employment characteristics & working conditions have an impact on health-related outcomes and health behaviors of workers, directly through their work, and indirectly through the material deprivation that has resulted from these factors. We have used the social epidemiological framework of eco-social theory to explain how the women cashew workers "embody" their precarious employment conditions [insecurity, poor organization of workers, weak collective bargaining, low wages, economic deprivation, limited workplace rights, inadequate social protection, and powerlessness to exercise workplace rights], leading to a greater exposure to potentially hazardous or unhealthy exposures and risks (Benach, 2010, Muntaner, 2010 & Krieger, 2011).

3. Methodology

This sequential exploratory mixed-methods study was conducted among women workers engaged in the cashew processing factories of Kerala. A cross-sectional survey was conducted among women workers working in private and public cashew factories from six districts of Kerala. Their socio-demographic & employment characteristics, working conditions, debt situation health status and health care access and utilization were assessed. Systematic sampling was used to select 3000 women workers from the list of workers provided by the randomly selected 44 cashew factories. A standard tool has been prepared in Malayalam with six major domains – socio-demographic characteristics, employment characteristics, working conditions, health status, health care access & utilization and debt situation. In-Depth Interviews were conducted among a diverse range of stakeholders, including women workers, development economists, policy actors who are specialized in the cashew processing industry of the state, health policy

analysts, health professionals, representatives of trade unions and workers' collectives and entrepreneurs from the cashew industry.

4. Results

A total of 2476 participants were surveyed from 44 factories from across the state, the majority being from the Kollam district. Due to a combination of the pandemic situation and the ongoing crisis in the sector, many of the factories had been closed and the open ones had restricted working hours. So, we had to settle for a slightly smaller number than our original intended sample size of 3000. The majority of the workers were from the private factories (2184), followed by the state-owned factories under the Kerala State Cashew Development Corporation (292).

4.1 Labour and employment in the cashew processing industry

The survey findings revealed that the mean age of workers was 49.76 and the majority of them were residing in rural areas (85.7%). About two fifth (40%) of the total workers belong to SC/ST category. Around four-fifth of the workers had more than eleven years of work experience in the cashew industry and the majority (82%) were registered as permanent employees. The highest proportion of women were engaged in shelling (35%) followed by peeling (31%), grading (26%), cutting (6%) and others (2%). More than three-fifth (61.1%) of the women reported that they performed their job by sitting/squatting on the floor. Majority of the workers had a monthly income ranging between 500-4000 INR.

Among the women who belong to the SC/ST category, 54.4% work in shelling, whereas their share in the peeling and grading category is around 15.9% and 17.6% respectively. More than three-fourth (79%) the workers have pink or yellow color ration cards [BPL category] and 16.9% labourers have blue or white color ration cards [APL category]. The proportion of women below the poverty line was high in all the occupational categories. However, the share was the highest among women engaged in shelling compared to other categories. Most (67.7%) of the workers were under debt of some kind. About 9% of workers were illiterate, and only 0.4% achieved a level of education of degree and above.

More than two-thirds of the labourers (71.6%) engage in an uncomfortable sitting position during work, which causes back pain. About half of the women (50.9%) reported repetitive movements, which cause joint pains, and around 35% reported poor body positioning during work. Around 27% of women face the problem of mosquitoes in the workplace. Around four-fifth (79.5%) of them reported that they were not allowed any change in the nature, intensity or duration of work if they experienced any difficulties due to health issues. The majority of the women (91.3%) reported that they took three breaks or rest intervals. Around 17% of the women skipped breaks or rest intervals. The main reason reported for skipping the rest intervals was to do more work or to complete work in order to get more salary/income.

Majority (89%) of the respondents get their payment on the basis of weight of nuts and about four-fifth (81.6%) get their salary directly as opposed to online payment. The majority of the workers (84%) get a bonus from their factory, 76.7% receive Employees State Insurance (ESI) benefits, and 72.5% get Provident fund (PF).

Around two-fifth (37.6%) of the respondents reported unhygienic toilets at the workplace. The commonly reported problems faced by the survey participants in the past year have been health problems (67.8%) and low wages/earnings (64.8%), along with lack of job security (30.5%).

Ethnographic observations at the factories across the state and in-depth interviews with workers revealed that gender discrimination at workplace is largely structural. Women are largely paid based on the weight of cashew nuts shelled, peeled or graded as opposed to a fixed salary or according to the number of hours they worked. The physical and material circumstances available for women workers were not adequate and there was a clear disparity in the conditions between public and private sector factories, with the state-owned factories faring significantly better.

The hardest of the three main tasks assigned was shelling, which required them to constantly sit in the same uncomfortable position for long hours. In many private factories, women sat on unclean and uneven mud floors. In addition to the

ergonomic pressures, this work had them exposed to corrosive cashew nut oil, which was extremely irritating to the skin. In the majority of the factories, occupational safety rules were not displayed, drinking water facility was not available in every room where workers assembled. Proper dining areas, restrooms for women employees, children's play areas, fire exits/extinguishers and toilet cleaning facilities were absent. There was no rotation system in many factories and the same women, who were mostly illiterate, predominantly from extremely poor and Dalit/Adivasi backgrounds, dominated the workforce in shelling and has been continuously working in shelling for decades.

The workers who were not registered employees shared their insecurities, regarding how they did not have access to benefits like Gratuity and Provident Fund, Employees State Insurance Scheme, Daily Allowance and Pension, which are entitled to the registered employees. Although women cashew workers did have some representation in trade unions, it was inadequate and they collectively lacked the power to make the necessary negotiations. Gender stereotypes have a major role in reducing their representation and leadership roles in trade unions. While women workers believed that political activism required spending a lot of time traveling and attending meetings, which they lacked due to their hectic schedules, male union leaders felt that political activism might not be possible for everyone, especially women, due to its unique pressures and demands.

4.2 Health and health care among women workers

The major health problems reported by the workers belonged to four categories – occupation-related health problems, reproductive morbidities, mental health morbidities and other morbidities. The main occupational health problems reported by the respondents were back pain, leg/hand/knee pain and joint pain. More than 70% of the women reported leg/hand/knee pain and back pain. Around 63% reported body pain, followed by neck pain (43.1%), joint pain (38.3%), headache (28.8%) and allergies (15.9%). Majority of the women reported multiple occupational health problems. Painful period (14%) and irregular period (8.4%) are the most common menstrual problems among cashew workers. The most

common reproductive morbidities reported were ovarian cyst or fibroid (6.8%) followed by abnormal genital discharge (2.9%) and irregular bleeding from the vagina (2.7%).

The majority of the participants reported low levels of anxiety and depression. 20.9% reported mild psychological distress, 8.9% reported moderate and 4.8% of women reported severe psychological distress. 28.5% of the women reported that their quality of life is bad, while about 25% of women reported that they were dissatisfied with their current health status. The prevalence of non-communicable diseases was found to be higher among the respondents. The most-reported morbidities were hypertension (19.6%) followed by thyroid (13.8%) and diabetes mellitus (12.3%). Leg/knee/hand pain, back pain, body pain, neck pain, joint pain and headache followed by an allergy due to the corrosive oil from the raw nuts and dust were the commonest occupation related health problems. The probability of having at least one occupation-related health problem, reproductive morbidity, menstrual problem and general morbidity was found to be highest among those engaged in the shelling, followed by those engaged in peeling and grading.

The workers themselves attributed their health concerns, particularly occupation-related health concerns, to the hard physical labour associated with their work. The pain seemed to be a constant reality of their lives and almost all of them have habituated to live and work through the pain.

More than 87 % of the workers have registered in a health insurance scheme. Among them, more than half (55.7%) of the workers registered in ESIS scheme and 32.3% in the Ayushman Bharat Scheme. The majority of the women reported that they usually visited either the nearest ESI hospital or other government health facilities for the treatment of morbidities.

5. Summary and Conclusion

Cashew processing has not largely changed since 1930s and it remains a labour-intensive process with little mechanization. The structure of the industry which is deeply ingrained in caste and gender stereotypes, the poverty and the capitalist exploitation manifested in the various ploys of factory owners – seasonalization of

workforce through the cyclic shifting of factories from place to place, opening up of unregistered covert home-based plants and informalization of labour – have made the women workers in the industry extremely vulnerable.

The findings of the study suggest that the employment conditions of women in the cashew processing industry, especially in the private sector, are precarious and they have embodied these potentially hazardous and unhealthy physical, chemical, biological, psychological and ergonomic risks which are manifested as occupational and other health morbidities. The narratives of the respondents and other stakeholders indicate that although there has been an improvement in the utilization of health care services, which is attributable to ESIS, barriers still exist. The determinants of both poor health and low health care utilization among the workers are closely linked to the employment & labour conditions and hence the interventions also need to be focused there. The continual attempts of a failing industry to minimize the cost of production have clearly, negatively impacted the health and quality of life of lakhs of women workers and this situation necessitates the intervention of the state.

Based on the findings of the study, we suggest that the policy interventions to address the concerns need to focus on three broad areas:

1. Directed towards improving the employment characteristics and labour conditions of workers to reduce their socio-economic vulnerabilities, address the gender-based discriminatory policies and practices towards women, especially with regard to wages and reduce potentially hazardous and unhealthy exposures that exist in their workplaces. The aim of these interventions should be to provide a safe, healthy and positive work environment for all workers.
2. Addressing the basic determinants of health of the women – nutrition, drinking water, health care access and utilization, recreation and relaxation, literacy and positive mental health.
3. Develop a Cashew Industrial Policy for the state to address the endogenous and exogenous factors that have led to the decline of the industry, avert the crisis and protect the employment and livelihood of lakhs of women.

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ABBREVIATIONS

APL	Above Poverty Line
AITUC	All India Trade Union Congress
BPL	Below Poverty Live
BMC	Bharatheeya Mazdoor Sangh
CEPCI	Cashew Export Promotion Council of India
CAPEX	Cashew Workers Apex Co-operative Society
CITU	Centre of Indian Trade Unions
CSDH	Commission on Social Determinants of Health
ESIS	Employees State Insurance Scheme
EMCONET	Employment Conditions Knowledge Network
GPF	Gratuity and Provident Fund
INTUC	Indian National Trade Union Congress
KCB	Kerala Cashew Board
KSCDC	Kerala State Cashew Development Corporation
NCD	Non Communicable Diseases
SC	Scheduled Caste
ST	Scheduled Tribe
PF	Provident Fund
SDOH	Social Determinants Of Health
WRMSD	Work-Related Musculoskeletal Disorders

1. INTRODUCTION

1.1 Background

The cashew nut processing industry is one of the leading agricultural industries in India, and currently, India is one of the leading producers, processors and exporters of cashew in the world. Over 65% of the world's export of cashew kernels is from India. As per the Directorate of Cashew and Cocoa, in the financial year 2017-18, India imported 6,49,050 metric tons of raw cashew nuts and exported 84,353 metric tons of cashew kernels (Kerala Cashew Board, 2021). According to the Cashew Export Promotion Council of India (CEPCI), cashew nut export contributed 4.39% of the total agricultural export earnings and 0.30% of the total foreign exchange earnings of Indian exports during the financial year 2017-18. However, over the past four years, both export and import have been showing a declining trend (Many R, 2019).

Kerala stands fifth in the country in the quantity of production and sixth in the area of cultivation of cashew (Kerala Cashew Board, 2021). In 2017, 36,390 metric tons of cashew kernel were exported from Kerala earning 2580 crores, which constituted 43.78% of the total cashew kernel exports from India. According to CEPCI documents, there are approximately 824 factories in Kerala, generating significant direct and indirect employment in addition to the foreign exchange through exports (Many R, 2019). The major share of factories is clustered around the Kollam district in Kerala, also known as the *cashew trading capital*. The factories work under both public and private ownership, but most are under private ownership.

There are various institutional mechanisms at the national and state levels to protect and promote the cashew industry, cashew export and protect the rights of the workers. The Cashew Export Promotion Council of India (CEPCI) is a national agency that largely focuses on promoting cashew kernel export from India. The Kerala Cashew Board (KCB) is a private limited company formed in 2017 by the state government to help fair procurement and import raw cashew nuts for

domestic processing. The Kerala State Cashew Development Corporation (KSCDC) and Cashew Workers Apex Co-operative Society (CAPEX) are two government organizations primarily committed to the protection of the workers' rights and to ensure that there is employment generation (Many R, 2019). Despite all the institutional mechanisms to protect and support it, the cashew industry in the state has been facing a burgeoning crisis since the past four or five years, which has been aggravated by the pandemic and the subsequent lockdown (Deccan Chronicle, 2018;KNN, 2018; DownToEarth, 2018). Almost 80% of the cashew processing factories are closed and the several others are shifting their factories to other Indian states. The crisis has been attributed to a myriad set of factors ranging from global capitalism and heavy import duty levied by the Central Government on raw cashew kernels in 2016, to inadequate state support and hyperactive trade unionism in Kerala (Many R, 2019). The crisis poses a challenge to the labour and employment scenario of the state as it has caused thousands of workers, particularly women from rural, disadvantaged circumstances, to lose employment and their livelihoods (Kerala Cashew Board, 2021).

Cashew processing is a labour-intensive industry and in Kerala, it has a long history of employing a significant number of women workers. It is estimated that the industry employs about 3 lakh rural women workers directly and generates employment for another ten-lakh indirectly. Kerala State Planning Board has estimated that the cashew processing industry is one of the major employment-generating industries of the state, providing livelihood for lakhs of workers from the poor and marginalized sections of society. While men in the industry are predominantly engaged in tasks like roasting, drying, supervision, loading, and unloading, which are relatively less labour intensive and hence require a lesser number of workers, women are almost entirely handling the labour-intensive kernel-processing tasks such as peeling, shelling and grading. The industry is characterized by high levels of underemployment, predominantly in the public sector, which provides work only for a lesser duration in a year, compared to private sector factories (Many R, 2019). There is a high proportion of informal employment – casual or temporary basis – in private companies and the employees have lesser wages and do not have any protection or entitlements like the Gratuity

and Provident Fund (GPF) or membership in Employees' State Insurance Scheme. In fact, even registered, regular workers in private companies reported that they do not have access to these entitlements. There is a clear division of labour along the lines of gender, which also reflects in the pattern of wages. While men get paid on a monthly salary basis, women get paid on the basis of the weight of processed nuts. This not only makes the women more vulnerable to exploitation but also are denied any earnings during the "no work" seasons (Thresia CU, 2007).

The unique exposures related to this line of work - the repetitive and unergonomic sitting postures, working near furnaces and contact with the cashew nut shell liquid – predispose the workers, particularly the women workers, to a whole range of occupational health concerns. Several studies conducted in Kerala and also from other parts like Assam and Karnataka (Borah S, 2019; Girish N et al 2012) have found that several occupational health and safety issues prevailed among cashew factory workers, with a majority of them experiencing health concerns like musculoskeletal issues including low back pain, pain in the neck, legs and knee cramps, due to ergonomic hazards of repetitive movement, uncomfortable workplace and poor body positioning. The exposures related to poor working conditions like the physical hazards (heat, dust and manual handling of goods) chemical hazards (chemical exposure, toxic fumes and poison ingestion), biological hazards (insects, contagious diseases, and unhygienic toilets) have implications for their health. Asthma and dermatological conditions have been reported among the workers from Kerala (Nelson V et al 2016). In addition to the poor working environment, difficult working posture, monotonous and tedious job, the work also entails psycho-social hazards like stress and coping issues and lack of adequate social support is a critical contributor in this regard.

Several studies over the past two decades have revealed that despite Kerala's remarkable achievements in the social sector, there are significant inequities and differentials in health indicators and quality of life between genders, across classes, castes and regions. A study published in 2007, which explored the implications of the intersection of gender, poverty and caste on the health of women cashew workers in Kollam district, indicates high levels of illiteracy, poverty, morbidity, fertility, gender-based violence, caste-based inequities, and lack of access to health care. The pattern of health care utilization among them reflected a lower reliance

on public sector facilities compared to private sector facilities for acute services, while a relatively higher utilization of public sector health services for hospitalization. This suggests the availability of public sector institutions offering inpatient care in the vicinity and the poor economic background of the workers. Low quality services, non-availability of drugs, doctors' unfriendly attitudes, inconvenient clinic hours and corruption leading to informal payments/bribes were cited by the women as reasons for having either not chosen health care or chosen expensive private health care. The high cost of private health care meant that the women were dissatisfied with services, experienced delays in diagnosis, along with debts incurred in order to access health care adding to their mental burden (Thresia CU, 2007). These concerns point to the nature of the development paradigm of the state, where, despite overall achievements, pockets of poverty and underdevelopment are created in specific sectors like coir, beedi and fishing, which provide employment for predominantly the people from poor, rural and marginalized sections.

The available evidence suggests that the employment in the cashew processing industry, especially among those who are informally employed in the private sector, is precarious, with a potential bearing on the health of the workers. It could also be inferred that gender-specific inequities, when intersected with caste, precarious employment and poverty, often result in denial of women workers their basic right to health. However, comprehensive research into the pathways through which gender operates in conjunction with other determinants like poverty and precarious employment, is scarce. This exploratory mixed-methods study, thus aims to assess the health status of women cashew workers in the Kerala state of India and explore the impact of their living and working conditions on their health. The study findings will support the efforts and policy initiatives to strengthen social and health protection for women workers engaged in the cashew processing industry of Kerala.

1.2 Objectives

i. To assess the health status of women workers employed in the cashew processing industry of Kerala.

ii. To evaluate the socio-demographic & employment characteristics and working conditions of women workers employed in Kerala's cashew processing industry.

iii. To explore the health care access and utilization among women workers employed in the cashew processing industry of Kerala.

iv. To explore the implications of socio-demographic & employment characteristics and working conditions on the health status, health care access, and utilization among women workers employed in the cashew processing industry of Kerala.

1.3 Conceptual Framework

The latter half of the twentieth century witnessed a shift in the political and academic discourse surrounding the determinants of population health to address a wide array of factors constituted by the structures of societies, myriad social interactions, socio-political institutions, social constructs and norms. The Commission of Social Determinants, in their framework introduced in 2005, broadly categorized these social determinants of health (SDOH) as structural (comprised of the larger socio-economic & political context and socio-economic position of individuals) and intermediary (constituted primarily by the material circumstances where people live and work) [Figure: 1.1]. Thus, employment and labour conditions critically contribute to determining the health and well-being of millions (Solar O et al, 2010).

The theoretical framework proposed by the Employment Conditions Knowledge Network (EMCONET) theorizes on the complex relationships among employers, government and workers' organizations, labour market, social policies, employment and working conditions of workers and their relationship with the health and wellbeing of workers. The model places the types and characteristics of employment available to society within the larger context of power relations across market, government and civil society, guided by policies related to labour markets

and workers' welfare. It acknowledges the presence of various types of employment ranging from full time permanent employment to slavery and bonded labour, which also corresponds to different types of working conditions characterized by different types of physical, chemical, biological, ergonomic and psycho-social exposures risks and hazards. Both these factors – employment characteristics & working conditions – have an impact on health-related outcomes and health behaviors of workers, directly through the work they do and indirectly through the material deprivation and poverty they are subjected to. The reliance on neoliberal economic policies have created a scenario where informalization of employment and precarious employment has been on the rise, especially in resource-poor settings. Precarious employment, which is often associated with informal employment, particularly in the informal sector, has been characterized by employment insecurity, reduced organization of workers and reduced opportunities for collective bargaining leading to weak, individualized bargaining between workers and employers, low wages and economic deprivation, limited workplace rights and social protection, and powerlessness to exercise workplace rights, leading to a greater exposure to potentially hazardous or unhealthy exposures and risks, ultimately affecting health (Benach J, 2010 & Muntaner C, 2010).

Figure 1.1 CSDH Conceptual Framework (Source: Solar & Irwin, 2010)

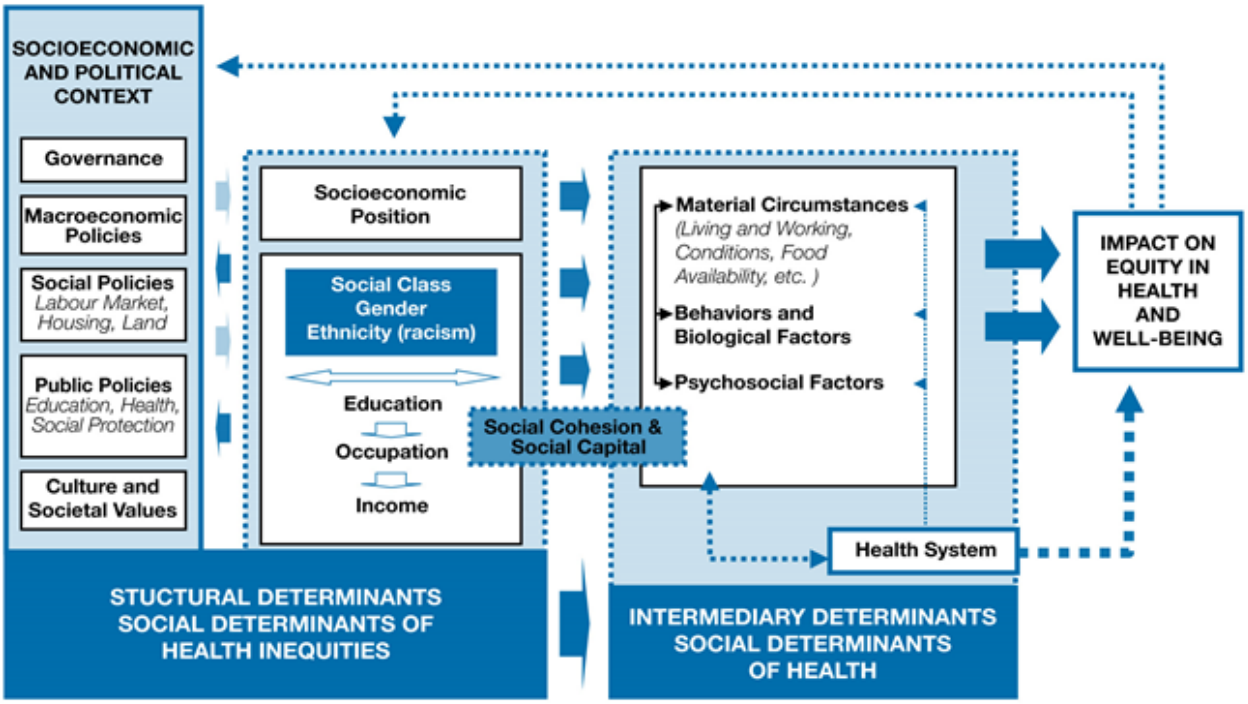
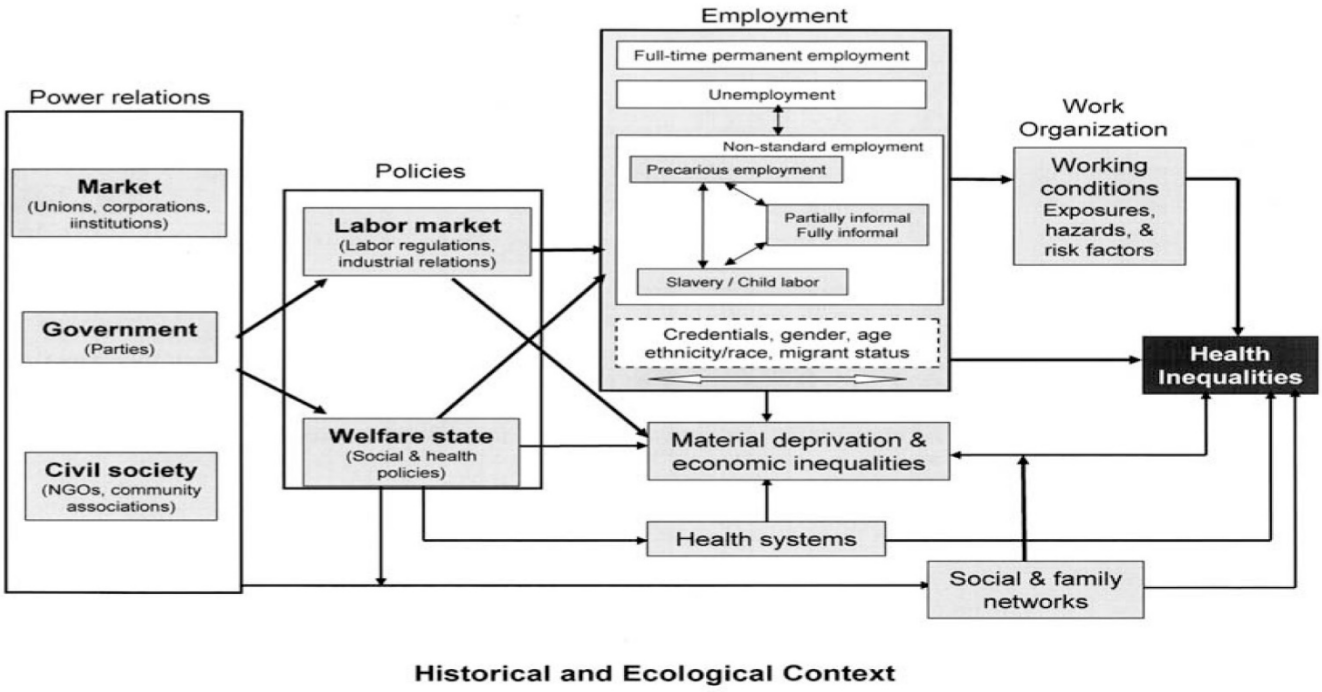


Figure 1.2 Theoretical framework of employment relation and health Inequities: a macro level model (Source: Muntaner et al, 2010)



There are multiple pathways, direct and indirect, which can explain the impact of precarious employment and associated working conditions on the health of individuals. However, it is critical to understand that it is not simply about the employment characteristics and labour circumstances but also about who these workers are. For instance, the majority of those engaged in the unorganized sector in India, comprising of both wage workers and self-employed workers, are poor, landless, or near landless with poor educational status, belonging to Hindu Scheduled Castes, Scheduled Tribes or Muslim communities (National Commission for Enterprises in the Unorganised Sector, 2007). These co-existing vulnerabilities, especially the issues of landlessness and the caste profile, are suggestive of historical pathways of oppression and marginalization and hence the impact of their employment characteristics and working conditions on the health needs to be examined using a multi-level framework incorporating multiple pathways. We use the social epidemiological framework of the eco-social theory proposed by the renowned epidemiologist Professor Nancy Krieger to explain the impact of precarious employment on the health of women cashew workers in the state of Kerala. The fundamental concept of this theory is "embodiment", which proposes that humans, like any living organism, literally incorporate, biologically, the world in which we live, including our societal and ecological circumstances. This process of embodiment is facilitated by specific pathways and this was used to explain how racism and racial discrimination operate to produce ill health among African Americans, Hispanics and others. Using the same approach, we propose that the women workers engaged in the cashew processing industry of Kerala, who predominantly hail from socio-economically marginalized sections of the society, are compelled by their own deprived circumstances to engage in precarious employment in this industry. The industry in turn is guided by macro and micro-level policies, institutions and norms that are structurally discriminatory to these workers. The workers "embody" their working conditions, exposing them to variety of biological and psycho-social risks and hazards that predispose them to poor health. The extent of these exposures is determined by the extent of their vulnerabilities, which are in turn determined by their social locations created through intersections of caste, class, and gender (Krieger, 2011).

1.4 Methodology

Study design: This sequential exploratory mixed-methods study was conducted among women workers engaged in cashew processing factories of Kerala.

Study setting: Since a majority of the cashew factories in the state are located in Kollam, a greater proportion of the cashew factories (25) located in public, private and co-operative sectors in this district were selected as the study settings. However, a smaller proportion of factories were also selected from other districts, namely Thiruvananthapuram (14), Pathanamthitta (2), Kasaragod (1), Kannur (1), and Ernakulam (1).

Study duration: The duration of the entire study was three months starting from November 2020, the pilot study was undertaken during December 2020 and the field study was completed during January 2021.

Study population: The study was primarily conducted among women cashew factory workers of Kollam district in Kerala. However, information pertaining to the policy aspects of the cashew processing industry, its history, current crisis, challenges faced by the workers related to their work, health concerns and barriers to health care access and utilization were also collected from a diverse range of stakeholders, including labour economists, policy analysts and actors specialized in the cashew processing industry of the state, health policy analysts, health professionals, representatives of trade unions and workers' collectives and entrepreneurs from the cashew industry.

Methods: A cross-sectional survey was conducted among women cashew factory workers in Kerala aged 18 years and above. It was decided that approximately 1% of the three lakh women workers employed directly in the industry would be surveyed to assess their socio-demographic & employment characteristics, working conditions, health status, health care access and utilization and debt situation. In-depth interviews were conducted among a diverse range of stakeholders to explore the implications of socio-demographic & employment characteristics and working conditions of these workers on their health status, health care access and utilization among women workers employed in the cashew processing industry of Kerala. A detailed scoping review of the pertinent literature and documents around the

employment and labour conditions and health of workers engaged in the cashew processing industry of the state was conducted and the themes have informed the tool and this report in each of the concerned sections.

Sampling: We randomly selected 44 cashew factories from a list of 864 registered factories in Kerala. We selected 3000 women employees from the list of workers provided by the selected cashew factories. The sample required from each of the selected factories was calculated separately beforehand, proportional to the total number of women workers employed there. If an already selected worker refuses to participate, then the subsequent name in the original list provided by the factory was approached until the fixed sample size from that factory was achieved. The participants for the qualitative component were selected purposively through theoretical sampling.

A total of fifteen in-depth interviews were conducted with a range of stakeholders including women workers from both private and public sector cashew processing factories (n=10), trade union leaders representing the four major political alliances – Centre of India Trade Unions (CITU), All India Trade Union Congress (AITUC), Indian National Trade Union Congress (INTUC) and Bharatheeya Mazdoor Sangh (BMS) (n=6), representatives from the management of public (n=2) and private cashew factories (n=4), development economist (n=1), health policy analyst (n=1) and health care professional (n-=1). The respondents were theoretically sampled to ensure that they represented diverse angles of the problem being researched and the view and perspectives that emerged were nuanced and multifaceted. The in-depth interview were deductively coded based on the major domains from the two frameworks (Employment Conditions Knowledge Network (EMCONET) and Eco-social theory by Nancy Krieger) used to conceptualize the study and then were thematically analysed using the method of constant comparison.

Inclusion criteria: All consenting women workers working in the selected factories for at least one year were considered eligible to participate in the study.

Tool: A standard tool has been prepared with six major domains – socio-demographic characteristics, employment characteristics, working conditions,

health status, health care access & utilization and debt situation. The domains have been finalized based on the conceptual framework of precarious employment and health, based on previous research studies and the pilot study that we had undertaken earlier. We have also used the four-item patient health questionnaire (PHQ-4) for measuring anxiety and depression. The quality of life was also gathered using the question on their perceived quality of life. The tool has been translated to Malayalam and back-translated to English, and piloted to test for its content validity and cultural sensitivity.

Ethical considerations: Ethical clearance was obtained from the institutional ethics committee of the host institution, the Kerala Institute of Labour and Employment (KILE), the Government of Kerala. The project strictly followed all the ethical guidelines throughout the course of this research. Written informed consent was sought from all the cashew factory workers who participated in the study and, verbal informed consent was obtained from all the stakeholders who participated in the in-depth interviews.

Outcomes: This study provides us with comprehensive data to understand the extent of the health problems and barriers in health care access and utilization among women cashew labourers using a representative sample from the state of Kerala, which constitutes the necessary baseline data to advocate for their occupational and health rights. The findings from the study could also guide the policymakers to build policies and programs to support the women workers and to protect them from exploitation and suffering.

Training - Training was given to the field investigators in all selected districts. The main objective of the training was to give an overview of the project to the field investigators, familiarise the interview and ensure quality data collection. During the training, the importance of ethical considerations was highlighted. The training aimed to get essential knowledge on management and provided the field investigators with the guidelines of field-level monitoring. Mock interviews were conducted by the field investigators during the training program. The main concepts covered in training were project mission, project planning, and monitoring, handling participants, getting consent from the participants, and ethical considerations during the fieldwork.

1.5 Structure of the report

This report has been organized into five major sections:

In the first section, we have introduced the report with the background of the study and its stated objectives. We have conceptualized the study from an occupational health perspective using the framework of precarious employment and its implications for the health of workers. We have also used the social epidemiological concept of "embodiment" to understand the pathways through which intersections of gender, caste and poverty operate to affect the health of women cashew workers of the state. This is followed by a discussion on the methodological and ethical considerations of the study.

In the second section, we discuss the history of the cashew processing industry in India, labour and employment in the sector, the current crisis affecting the industry, and its implications for labour. We use a combination of literature and document review, ethnographic observation notes and analysis of in-depth interviews with stakeholders to build this section.

The third section of the report deals with the socio-demographic and employment characteristics, labour conditions and debt situation among the women workers employed in the sector. In addition to the emergent themes from the scoping review pertaining to precarity in employment in the sector, we also use the findings from our survey, notes from ethnographic observations of cashew processing factories and analysis of in-depth interviews with stakeholders to assess the actual employment characteristics and labour conditions available to women workers employed in cashew processing in the state.

In the fourth section, we use the available evidence from the scoping review to theorize how women workers "embody" these employment characteristics and working conditions to develop health concerns. The survey findings presented in this section focuses on the health status, health care access, utilization and barriers experienced by women workers. We then use the findings from our survey, notes from ethnographic observations of cashew processing factories and analysis of in-depth interviews with stakeholders to validate the propositions of "embodiment"

of precarious employment and poor working conditions to result in health concerns by the women workers.

In the fifth section we present the concluding observations of the research team regarding the employment and labour circumstances in the cashew processing industry of the state and its implications in the health of workers.

In the sixth and final section, we summarize the study findings and present a few policy suggestions and recommendations to address the concerns pertaining to the employment situation, working conditions, workers' rights & entitlements, health concerns and barriers related to health care access and utilization among women workers employed in the cashew processing industry of the state of Kerala.

2. LABOUR AND EMPLOYMENT IN THE CASHEW PROCESSING INDUSTRY OF KERALA

2.1 Brief History of Cashew Processing Industry in Kerala

A quick glimpse into the history of growth of cashew processing industry in South India, since the early twentieth century, reveals that it has also largely been a narrative of the continuous efforts by the western and regional entrepreneurs to secure cheap and compliant labour to drive a predominantly export-driven industry. Thus, engagement of a large women-dominated workforce in precarious employment has been a constant feature in the evolution of this industry in the state.

The cashew tree was introduced to South India in the seventeenth century by the Portuguese, originally due to its application in preventing soil erosion due to the extensive root system. The cultivation of cashew in the state, which was initiated on a small scale, became the source of the flourishing cashew industry by the 1930s, and this was primarily due to the western companies which realised its potential as a profitable export commodity. The export-based industry thrived and huge profits were realised. As the industry did not require much capital, local entrepreneurs soon entered the field, set up small plants, recruited workers, purchased raw nuts on a small scale for their roasting and shelling, while the western companies focused on the more profitable aspects of packaging and marketing for export to US and Europe. Soon, the local entrepreneurs managed to centralise all these activities and open their own factories. Most of these early entrepreneurs were from a handful of "families", who dominated the field, employed more than half of the workforce in Travancore and made huge lucrative gains. Subsequently, many of these "cashew kings" of the 1920s and 1930s especially from Kollam diversified to other areas like hotels, shipping and entertainment and also became powerful political lobbyists. As the export thrived, the number of factories also increased and cashew workers soon became one of the largest sections of factory workers in the state – most of them being women.

2.2 Labour and Employment in the Industry

Cashew processing industry best demonstrates the impact of global capitalism on labour and employment with its continual attempts to minimize the cost of production. During the early twentieth century, the factories largely concentrated in the Travancore region, because of the absence of any labour regulations. The absence of a law stipulating maternity benefits and one restricting child labour greatly empowered the factory owners and created an appropriate environment to extract maximum labour at low wages from women and children. Due to the unique combination of skilled workers and low wages, raw cashew nuts started to be imported from other parts of the world to be processed in the state.

One of the first clear instances of precarious employment in the industry, was the creation of a seasonal workforce. In 1945, when the cashew processing industry was brought under the "Factory Act", the factory owners started a practice of cyclically shutting down the plant in one place and opening it in another, thereby artificially creating a "seasonal workforce" in both places. The workers in both places were deprived of the benefits of being "employees" and soon started to endure prolonged period of unemployment. The number of factories and seasonal workers kept on increasing steadily. Although the reason given by the factory owners for this practice was the lack of raw nuts for processing, a government report in 1983 observed that this "seasonalization" of labour was intentional and that the number of factories which had been opened in different places far exceeded the capacity of the industry.

The implementation of labour laws and nationalization of factories due to the rise of trade unionism threatened the availability of cheap labour. However, low capital investment and technological requirements to start the factories ensured that their relocation could be achieved easily. The earlier ploy was again used during the 1960s to shift many factories to Tamil Nadu, where there was weak trade unionism and even lower wages. Factory owners from both states quelled any collective demands by threatening to shift the factories from one state to another, threatening to eliminate the sole livelihood means of thousands of workers and effectively ensuring cheap labour. Low wages, employment insecurity and poor working conditions placed thousands under precarious employment circumstances.

The introduction of minimum wages for workers during the 1950s led to an increase in the number of unregistered "cottage processing units", which were actually covert units owned by the owners of the registered factories where labour laws were flouted and wages were lower than stipulated. In 1967, as a response to the government banning of unregistered factories, many registered factories began to close down and state ownership was established to secure employment and to improve the working conditions. Kerala State Cashew Development Corporation (KSCDC) and the Kerala State Cashew Workers Apex Industrial Cooperative Society, Ltd. (CAPEX) were established towards this end and several private factories were nationalized. Initially, there were about 70 state-owned factories which employed nearly one-third of the work force engaged in cashew processing. Although the factories were successful in running profitable establishments by engaging workers with decent wages and fringe benefits, the situation soon deteriorated. By the 1990s, underemployment became a significant issue. The state-owned factories could stay open only for about three or four months a year and many of them have been running in loss.

The political equations in the state also need to be discussed in this context. From 1980 onwards Kerala has had a consistently alternating bipolar coalition system – the United Democratic Front (UDF led by Indian National Congress) and Left Democratic Front (LDF led by Communist Party of India (Marxist)). The fierce power struggle between the LDF, who have been strong proponents of labour-friendly policies and regulation of industries, and the private cashew factory owners, have been crucial in shaping the evolution of this industry in the state. The UDF which has advocated for a less regulated industrial environment has been largely sympathetic to the concerns of the private cashew factory owners and this position has led to heated political debates and tussles between the alliances.

2.3 Gender Division in Labour

Cashew processing has not largely changed since 1930s and it remains a labour-intensive process with little mechanization. There are six major tasks involved – roasting, shelling, drying, peeling, grading and packing. Roasting is done to render the thick, outer shell of the nuts brittle which is then removed through shelling to produce a clean, whole kernel. Shelling has been described as an extremely unpleasant task with exposure to the corrosive, sticky oil from the raw cashew nuts which causes severe skin irritation for the workers. Before peeling the nuts, they need to be dried which is done in ovens. This process reduces the moisture content and shrinks the nuts making it easier to peel the brown skin around it. This is followed by the process of peeling, which has remained totally unchanged since the beginning of the industry. The brown thin skin is manually peeled using fingers or a small knife. Grading is another manual task which has remained unchanged since the 1940s. It involves sorting and quality checking of nuts manually and the workers are trained to estimate the size and grade of drugs with remarkable speed. 95% of the workers engaged in cashew processing are engaged in shelling, peeling or grading and presently all of the workers engaged in these tasks are women (Lindberg A, 2001, Lindberg A, 2005). Currently, the proportion of women among the workers engaged in cashew processing in India is over 90% (Many R, 2019).

Anna Lindberg observes that there is clear gender division of labour in cashew processing industry, and attributes it "gender stereotypes" which are culturally and ideologically legitimized. She observes that the poor mechanisation of the industry ensures that the bulk of the job involved in it is manual, which fits perfectly with the gendered assumption that women are naturally more patient beings with high manual dexterity. As part of the observations made for her study on the women cashew workers of the state, she found that all of the employers, civil servants and trade union leaders that she interacted with were males, while the actual "factory hands" were predominantly women.

"The largest proportion of factory workers in Kerala has always been the women cashew factory workers. You have to be inside a cashew factory to actually understand the plight of the women. This industry comes under the Factory Act, but it just means many people are engaged in doing a work in a large shed. Do not expect a "modern factory setup" inside a cashew processing unit. The women, the way they work is unbelievable. They work crouching, in shelling the roasted cashew nuts among fumes, the corrosive oil of raw nuts without gloves or anything. This was way back in the seventies. Men were only 5%, but trade unionization favored the "heroic" men over women and they were engaged as salaried employees, while women who did the bulk of the work were treated as casual workers. Trade unions are dominated by the male workers and they carried the patriarchy with them. When the issue of wages came up in front of the minimum wages committee, these trade union leaders said that the work done by the women are largely supplementary and that they don't need regular wages, only need to be paid by piece rate. So trade unions themselves failed the cause of these women"

- Development economist who worked in cashew processing industry of Kerala

Roasting was the only task associated with the industry, which was dominated by men. Lindberg also points out that in 1930, at least 30% of the workers in the sector were males. But by 1960, the share of males had considerably reduced and has continued to remain so. The gender stereotyping of women being associated with poor aptitude for working with machinery could also explain the overwhelming women presence in this industry with little or no mechanisation. She also observes that the introduction of gender-specific protective regulations of the state has been quite counterproductive and has in fact, been used to effectively restrict women's participation to specific tasks. For instance, consequent to the state declaration in 1957 that roasting and shelling were hazardous occupations due to the negative effects of corrosive cashew oil; women were exempted from engaging in roasting. By then, the more challenging procedure of pan roasting had been replaced by the relatively safer version of drum roasting. However, women were allowed to continue in the more strenuous, manual and low paying task of shelling, which was also dangerous. Slowly, these gender divisions began to be perceived though the cultural lens of the more "masculine" roasting and the more "feminine" shelling. This in effect ensured that men got greater employment opportunities in roasting which earned the highest wages out of all the tasks.

2.4 Intersection of Gender, Caste and Class among Women Workers Employed in Cashew Processing Industry in Kerala

Anna Lindberg, in her landmark study which explored the construction of identities among women workers employed in the cashew processing industry of Kerala, through oral testimonies of three generation of women workers, observed that the case of cashew workers of Kerala reflects brutal and emphatic capitalist exploitation. This manifested in the various ploys of factory owners – seasonalization of workforce through cyclic shifting of factories from place to place, opening up of unregistered covert home-based plants and informalization of labour. However, she argues that capitalism and poverty alone are insufficient to explain their exploitation. She justifies it by pointing out that poor working conditions and gender-discriminatory labour practices were followed even in state-owned factories despite the labour-friendly policies. She argues that despite the seemingly pro-labour stance of the state, the caste identities of the workers have been passively politicized and the gender identities have been completely depoliticized, due to which women's, especially lower caste women's exploitation in the industry have been largely condoned. She identifies that although these women have witnessed their mothers working in the cashew factories, contributing substantially to their family incomes, the influence of hegemonic gender discourses of patriarchy which *effeminized* women, particularly the lower caste working women during the twentieth century, so much so that they did not identify themselves predominantly as "working class". In other words, despite being engaged in hard labour for generations and being central bread winners, their class identities have been politicized only peripherally. The vicious labour rights violations, unemployment, under employment and precarious employment, alienation from active trade unionism and the strong dependence on men – ideologically and discursively – meant that their class consciousness was only superficial. However, the language of class managed to obscure the caste and patriarchal structures. While capitalism has pushed them to poverty and made them desperate to accept the poor labour and employment circumstances, the hegemonic gender structures permeated so deep that they socially defined themselves as house-wives dependent on men for their sustenance, regardless of whether they were indeed just housewives or not. Gender

stereotypes of able-bodied, active, political, breadwinning male workers adept at handling machinery as opposed to patient, manually dextrous, technologically inept, peripherally political, caring, nurturing and family-oriented women workers have defined and shaped the experience of labour and employment in this industry (Lindberg A, 2001).

Another study which explored the explore the unequal power relations and multiple faces of discrimination experienced by women cashew workers in Kollam district identified that caste, class and gender interplayed to marginalize the women. Among the workers, Scheduled Caste women were most deprived followed by the Muslims. These women were already extremely poor with low levels of literacy, educational achievements and access to health and other services. The study reported that while women workers receive their wages at a piece rate, men received salaries on a monthly basis which enabled them to claim a third of the remuneration even in months of "no work" (Thresia CU, 2007).

2.5 How do Women Workers "Embody" their Employment and Working Conditions?

The literature examining the health status of cashew factory workers is scant. However, the available studies clearly suggest that the employment characteristics and working conditions in the cashew processing industry has implications for the health of the workers.

Working near furnaces, unhealthy sitting posture, and contact with the cashew nut shell liquid make the workers vulnerable to many health issues. A cross-sectional study was conducted among female workers engaged in randomly selected four cashew processing units in Kollam district, southern Kerala. Only workers from peeling, roasting, grading and shelling sections were included in the study. The results showed that low back pain was the major problem (48.8%), followed by hand and wrist pain (46.6%), knee pain (37.8%), and neck pain (32.5%). Of the workers who engaged in roasting, 86.6% had experienced burns. Workers involved in roasting (53.3%) and shelling (43.7%) had blackish staining in their palms and fingers. Chronic respiratory illness was highest among those engaged in the shelling, with 22.5% ($p < 0.001$). Among the study subjects, 10.2% of workers

reported prolapse of uterus. Frequent eye pain/strain was reported mainly by workers engaged in peeling (42.5%), and it was lowest (4.4%) among those involved in roasting ($p<0.001$). Hypertension and diabetes mellitus were reported by 15.2% and 21.2% of the study subjects respectively. Low backache, wrist and hand pain, knee pain and neck pain were the major musculoskeletal problems reported in the decreasing order among the cashew workers in this study. Wrist and hand pain was highest among workers engaged in grading and peeling so as the low backache, knee pain and neck pain. Majority of the women workers in the industry sit/squat on the floor to perform tasks such as shelling and peeling. Squatting postures affect soft tissues such as muscles, ligaments, and spinal discs. Squatting exerts pressure on different body parts such as the leg, knee, thigh, back, spinal cord, shoulder and feet. The workers squat barefooted on the floor with the trunk bent and eyes fixed on the kernel in the shelling section. Long hours without a regular break, repetitive movements, fixed working position, and prolonged visual concentration are common among cashew nut workers and which lead to musculoskeletal and visual problems. Health-related issues pertaining to the musculoskeletal system, respiratory system, and skin conditions are highly prevalent among women engaged in the cashew processing industry. The study suggests developing a comprehensive program to prevent health-related issues among women engaged in cashew processing industries.

Waikar and Singh attempted to know the physical characteristics and physical fitness of women workers involved in cashew nut units in Konkan Region of Maharashtra, India (Waikar G & Singh S, 2018). Around 20 per cent of the women working in peeling of the kernel were found to have severe chronic energy deficiency. Mild chronic energy deficiency and moderate chronic energy deficiency were reported by 10 per cent off women. Around 5 per cent of women have obesity. The study concluded that the physical fitness of women involved in cashew nut factory is less than satisfactory due to poor nutritional status, heavy workload, less resting time etc. The study suggests providing ergonomically designed tools and working layout among cashew processing workers. Nutritional awareness and workplace guideline campaigns should organize to enhance work efficiency and to reduce risk factors.

The paper titled, “Occupational Hazards of Cashew Workers in Kerala” (2019) by Kinslin and Jaya Kumar aims to find the most common workplace hazards of the workers employed in the cashew processing industry in Kollam district, Kerala. They tried to analyze the living conditions, physical health as well as mental health of cashew workers in Kollam district. Biological hazard includes the threat from insects like mosquitoes and un-hygienically maintained toilets were also considered. Ergonomic hazards include repetitive movements, uncomfortable workplace sitting positions and poor body positioning in almost all the works involved with processing cashews. Psycho-sociological issues include stress related to work, issues related to working life balance and inadequate support from supervisors and employers were also explored. Many of the insecurities affecting the lives of cashew workers starting from health hazards to lack of adequate social protection seem to have persisted. The study suggested that the government should take necessary steps to prevent the risk of hazards in the cashew processing industries by providing gloves, neat and clean environment including hygienically maintained toilets. Also, that the authorities should ensure minimum exposure to toxic gases and giving moral support to the suffering employees.

A study on the problems and prospects of cashew-based industry in Kerala by Kumar (2018) found that cashew workers are exposed to health risks due to the characteristics of their job. Exposure to smoke from furnaces, contact with the cashew nut shell liquid, unhealthy sitting posture, avoidance of rest intervals to maximize output, unhygienic environment in the factories and the chances of accidents make the workers in the cashew sector vulnerable to health issues. The other problems of cashew workers are the high financial indebtedness reflected in low earnings which in turn had implications for health care access.

A study undertaken at V.V. Giri National Labour Institute (2014), which examined the socio-economic profile of cashew workers and their households, found that more than four-fifths of the workers reported health-related problems due to their work in the industry. Pain in the leg/hand/knee/neck/joints and body is the most reported health problems. Female workers reported more problems than male workers.

The overall approach of the study premised about the pertinent need to protect the cashew workers welfare and rights for the sustainability of the cashew industry. A study on socio-economic conditions of women workers in cashew industries of Kanyakumari district by Sivanesan (2013) investigated the working conditions, income and expenditure pattern, problems and living conditions of women workers of cashew industries in Kanyakumari District. The workers were found to have skin diseases; asthma, T.B, and anemia were 37.35%, 16.65%, 13.35% and 8% per cent respectively. The majority of workers are affected by skin disease. According to the study, the standards of living of the cashew industries women workers were very low and their socio-economic conditions were very poor. The study suggested that the government should fix and strictly implement the minimum wage system in order to cater to the needs and give necessary training to the women workers to increase the efficiency.

A study which focused on the ergonomic assessment of drudgery of women workers involved in cashew nut processing factory in Meghalaya, India by Borah (2019) assessed drudgery in terms of physiological responses, work- related musculoskeletal problems. It also analyzed the relationship between demographic factors and health risk factors of women worker. In this study conducted on a sample of forty women labour between the age group 20-50 years involved in shelling and peeling activity of cashew nut factory, the workers complained of severe to very severe pain in the upper arm (4.73), lower arm (4.60), fingers (4.93), thigh (4.43), feet (4.10), upper and lower back (4.63 and 4.53), shoulder joint (4.38), knee (4.43) and ankle (4.25). In terms of self-perceived exertion, workers expressed that shelling work is heavy to very heavy and the peeling workers reported their work to be moderately heavy to heavy. Women workers felt severe to very severe pain in fingers, wrists, and the upper and lower arm which is due to more strain while shelling cashew nuts. Moderate to severe pain was reported by the workers in the neck (3.88) and eyes (3.68). This is because when the job demands fine visual attention, the worker leans forward to see clearly. This forward bend of the head and trunk put stress on the lower spine and neck muscles, making them fatigued. Thus, it was evident that women were working in an awkward sitting posture for prolonged periods throughout the day and hence suffered from neck, wrist and

shoulder disorders. Women workers had lots of physiological and musculoskeletal hazards including pain in fingers, wrist, joints, upper and lower extremities due to continuous working right from early morning till evening; wounds in fingers as working with knife and wooden mallet; were prone to Repetitive Strain Injury as they worked with arms repetitively. Continuous sitting on gunny bag, bending of legs for hours lead to many musculoskeletal and neurological disorders. The study concluded that the workers had chemical health hazards as they came into contact with caustic acid, which oozed from the cashew shell after roasting, which leads to discoloration and tanning of palm and skin infections.

A study (Sethulekshmi JR, 2018) which examined the quality of work-life of employees found out that the quality of work life of employees in the cashew industry in Kollam district was low, with employees from public sector factories scoring better than that of the private sector. The study suggested taking measures to improve the Quality of Work Life of employees to get better performance from them.

Another study (Rjumohan A, 2009) which examined by means of a case study, a cashew nut processing factory in Kanyakumari District of Tamil Nadu State, reported that the risk for women in processing cashew nuts stems from the caustic oil which burn the skin and produce noxious fumes when heated. It was also reported that long hours without regular break, repetitive movement, fixed working position and prolonged visual concentration are common place for tasks such as cashew nut shelling.

Satheeshkumar and Krishnakumar (2018) conducted a study which examined the prevalence of work-related musculoskeletal disorders (WMSDs) among cashew processing industry workers in Kerala. The subjects were randomly selected from three cashew processing industry situated in Kollam district of Kerala state in India. Lower back pain was the most prevalent among the subjects (54.6%). Knee (54.3%) is the second most prevalent body region where affects the disorder followed by neck (46%), shoulder (40%), upper back (36.6%), elbow (32.6%), ankle (26.8%), hip (16.9%) and wrist (13.1%). The study concluded that when the duration of employment increases, the symptoms of WMSDs were also found to be generally increasing in the body region, shoulder, elbow, wrist, hip, knee and ankle. The study

suggested focusing on designing the workstations with the application of ergonomic principles to improve the working conditions and to reduce the WMSDs problems in the industry.

A study by Prasad and Kani (2016) assessed and compared the status of occupational safety and health at cashew nut factories at Kollam district. About 80% of workers suffered from back pain, 73% having pain in the neck, 69% having joint pain, and 44% suffering from cramp in knees, and 5% have asthma and skin irritations. The occupational diseases are mainly seen in aged persons or those who are working for more than five years in the cashew industry continuously. The study suggested the adoption of safety measures for each unit workers. By adopting safety measures like wearing gloves, mask, having exhaust fans, sufficient rest time, proper sitting posters, availability of medical facilities within the unit, we can reduce the impact of occupational and health complications.

A study by Narsia and Raj (2020) focused on formulating and implementing participatory ergonomic program in order to prevent incidence of Work-Related Musculoskeletal Disorders (WRMSD) among cashew nut factory workers. Out of the 160 subjects screened, 58 were selected and using Nordic pain chart structured interview was done. Ergonomic intervention was given for three months, and again, the follow up was taken. The intervention consisted of exercises and stretches for their respective joint pain, before starting their work shift and in their micro breaks. They were also taught ergonomic modifications and were asked to follow the same. The study concluded that participatory ergonomics (PE) is beneficial in reducing the risk as well as work-related musculoskeletal disorders and pain.

An exploratory study conducted among the cashew-processing women workers of Kilikoolloor village, in the Kollam district of Kerala (Thresia CU, 2007) found that back and body pain, dermatitis, and leucorrhoea were the commonest self-reported health problems. Due to the prolonged sitting in crouched position, there was a high level of musculoskeletal problems and the direct contact with corrosive nutshell liquid contributed to dermatitis on fingers and hands among a majority of the shellers. A significant proportion of the women suffered from reproductive health problems including miscarriages and uterine prolapse. The average number of births (2.9 per woman) was higher than state averages for total fertility among the

women who reported high illiteracy and poor educational achievements. The living and working conditions reported by the workers were appalling, along with experiences of mental stress and violence (Thresia CU, 2007).

The available literature suggests that the bodies and minds of women workers engaged in cashew processing industry "embody" their work experiences and drudgery, directly through the effects of physical, chemical, biological, ergonomic and psychological exposures and risks as part of work, and also indirectly through the material deprivation and poverty, which affects their nutritional status, access to health care and other determinants of health.

2.6 Current Crisis and its Implications for Labour and Employment

Despite its long history and strong institutional base, the cashew processing industry in the state is currently undergoing a severe crisis, manifested as closures, declaration of non-performing assets or shifting base of more than 80% of factories. This has implications for the employment and livelihood of lakhs of women employed in the sector (The Hindu, 2020).

Most of the news reports surrounding the crisis in the industry portray it as a relatively recent phenomenon due to rising operational costs since the central government hiked the import duty of raw kernels in 2016. However, a report by the Kerala Institute of Labour and Employment on the causes of the crisis, identifies the crisis as the outcome of a slow process of decline of at least two decades, operated by a combination of unaddressed exogenous (globalization and free trade agreements, emerging players in the cashew processing industry, oligopolistic buyer's market and strict quality standards and market regulations of developed countries which import the processed cashews) and endogenous factors (informalization, organizational inefficiency & windfall strategies, poor adoption of technology, inadequacy of capital and unavailability of credit, disputes among industrialists, anti-labour attitudes, dependence on the state and deficient market innovation). The report identifies that the introduction of neoliberal economic reforms initially proved useful for the industry due to opening up of new global markets for trade. It led to sudden economic prosperity and invited many more

entrepreneurs to the sector, as a result of which the number of factories rose from 200 to 824. However, it also exposed the industry characterized by infrastructural inadequacy, organizational inefficiency, technological insufficiency and poor management practices to the global competition in trade with negative implications.

The global circumstances surrounding the production, processing and export of cashew nuts have changed significantly. When the state entered the cashew processing industry in a significant manner during the 1930s, it was one of the sole players globally. Not only did we have a huge share of the exports, but also was one of the major importers of raw nuts. The domestic production of raw nuts witnessed a major decline over the years, while. Several nations, like Vietnam started producing cashew nuts in a big way and their share has far exceeded that of ours since then. Many African countries who were major producers also entered the cashew nut processing industry and also embraced mechanisation in a huge way which has enhanced their productivity.

A major endogenous cause identified by the report was the anti-labour attitudes of the cashew industry entrepreneurs. Although, the entrepreneurs attributed the high wages and the labour welfare policies of the state as reasons for the crisis, the report finds that the earnings of the workers in the sector are not at par with that of other industrial labourers from the organized sector. The report points out the poor working conditions and the relatively lower number of working days in the sector compared to other sectors indicating rampant informalization of labour and precarious employment (Many R, 2019).

In many of the news reports concerning the crisis, the women workers have admitted that in the wake of the crisis and closure of factories, they are even willing to work for lower wages to protect their livelihoods. Such expressions of desperation and anxiety among the already vulnerable women workforce is only going to further enhance the informalization and precarity (Deccan Chronicle, 2018; KNN, 2018; DownToEarth, 2018)

"The concerns affecting the sector are also affecting the women, because this job is their life. The crisis has compromised their jobs and having regular work is critical for them to move from one day to another. It is not something that they do for pastime, for many of these women, losing this job means poverty, starvation. So, the crisis needs to be addressed for the sake of these women."

-Representative from the management of the cashew corporation in the public sector

3. Employment Characteristics and Labour Conditions: Findings from the Study

A total of 2476 participants were surveyed from 44 factories from across the state, the majority being from Kollam district. Due to a combination of the pandemic situation and the crisis in the sector, many of the factories had been closed, and the open ones had restricted working hours. So, we had to settle for a slightly smaller number than our original intended sample size of 3000. The majority of the workers were from the private factories (2184), followed by the state-owned factories under the Kerala State Cashew Development Corporation (292).

3.1 Socio-demographic and economic status of women workers engaged in the cashew processing industry

The basic socio-demographic characteristics of the sample are presented in Table 3.1. The highest proportion of cashew workers (42.2%) was in the age group of 50-59 years. And around 12% of women were older adults (≥ 60 years). The mean age of workers was 49.7 years (SD: ±8.70). The majority of the cashew women labourers (85.7%) were residing in rural areas. The social groups were classified into two: SC/ST and others. Among the total women, 40% of workers belong to the SC/ST category. Around 1.6% of the respondents did not answer the question on their monthly income. Among others, the average income was Rupees 3590.

Table. 3.1 Socio-demographic characteristics of women

Background characteristics		N (%)
Age	< 30	23(0.9)
	30-39	289(11.7)
	40-49	835(33.7)
	50-59	1045(42.2)
	60+	284(11.5)
Place of Residence	Rural	2123 (85.7)
	Urban	353 (14.3)
Caste	SC/ST	767 (40.0)
	Others	1709(60.0)

The majority (82%) of the women have a permanent job at cashew factories. The highest proportion of women were engaged in shelling (35%), followed by peeling (31%), grading (26%), cutting (6%), and others (2%).

Figure 3. 1 Type of Job

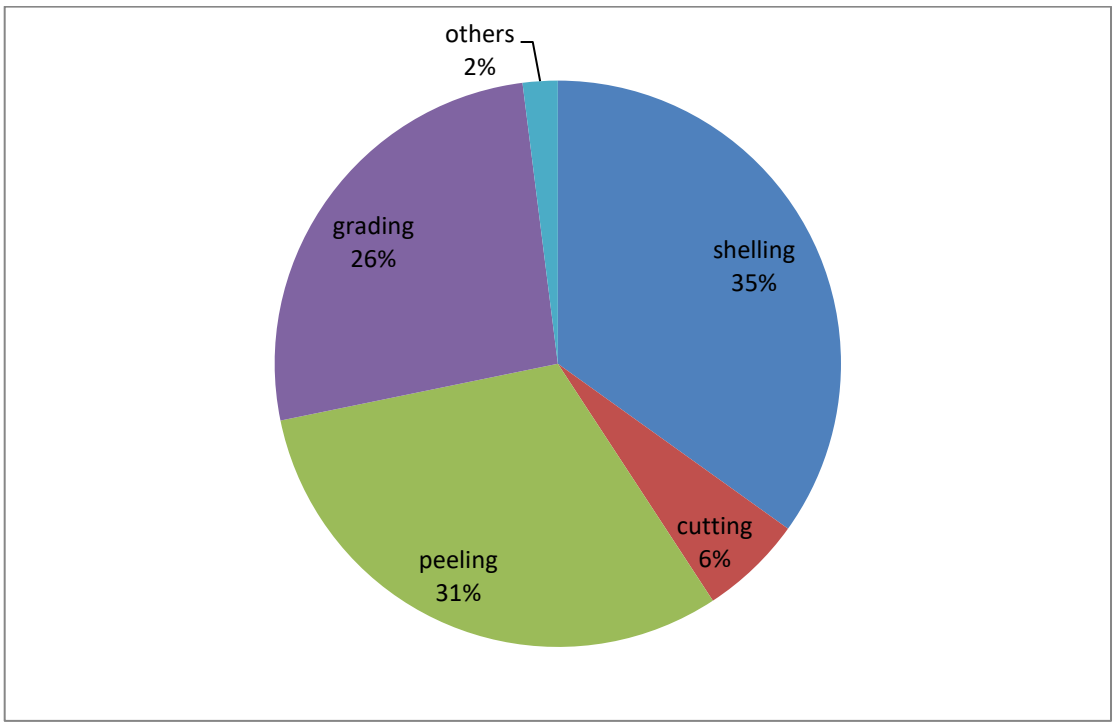


Figure 3.2 shows the distribution of women in different social groups by their type of job. Among the women who belong to the SC/ST category, 54.4% work in the shelling, whereas the share of women in the peeling and grading category is around 15.9% and 17.6%, respectively. Around 65% of the women engaged in shelling and cutting belonged to the SC/ST categories. On the other hand, more than 65% of the workers in peeling, grading and others, belong to the general category.

Figure 3.2 Distribution of women according to type of job and social group

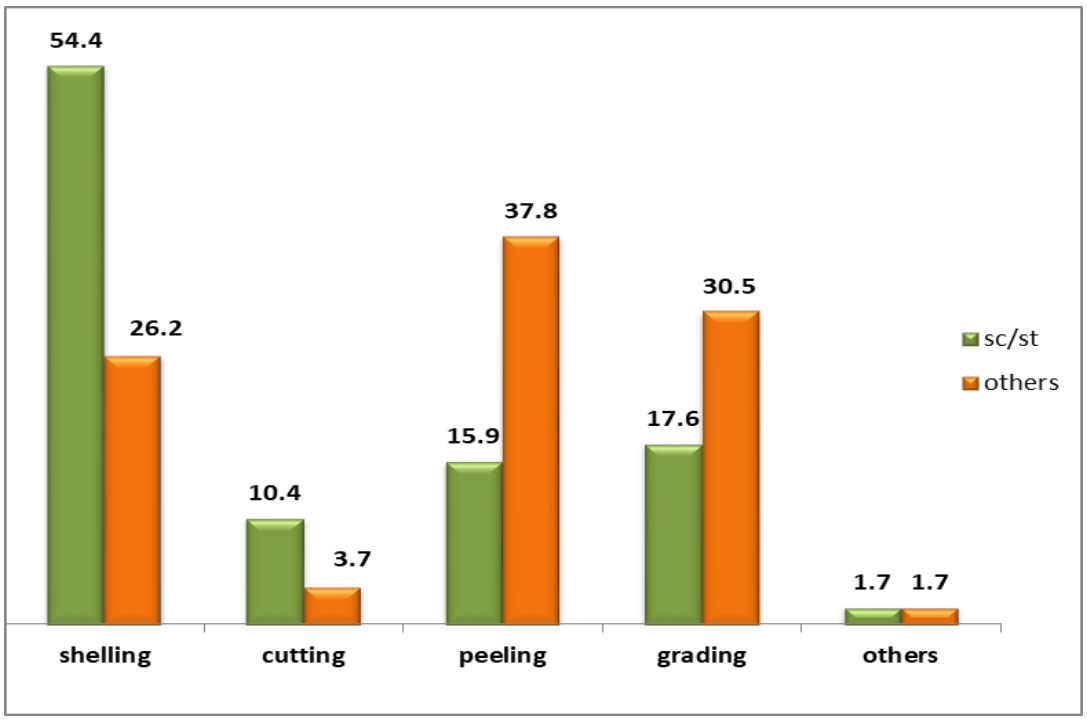


Table 3.2 Distribution of women by colour of ration card

Colour of card	N (%)
White	97 (3.9)
Blue	419 (16.9)
Pink	1597 (64.5)
Yellow	352 (14.2)
No card	10 (0.4)
No response	1(0.04)
Total	2476 (100.0)

The poverty status was measured by collecting data on the colour of the ration cards and it was classified as women who possess pink or yellow cards belonging to below poverty line (BPL) and women having white or blue cards as above poverty line (APL). Ten women reported having no ration card. Around two-third, (64.5%) of the respondents have pink colour ration cards, and 16.9% have blue colour ration cards. Only a few (3.9%) possess white cards. Around 80% had BPL cards.

Figure 3.3 Under any kind of debt

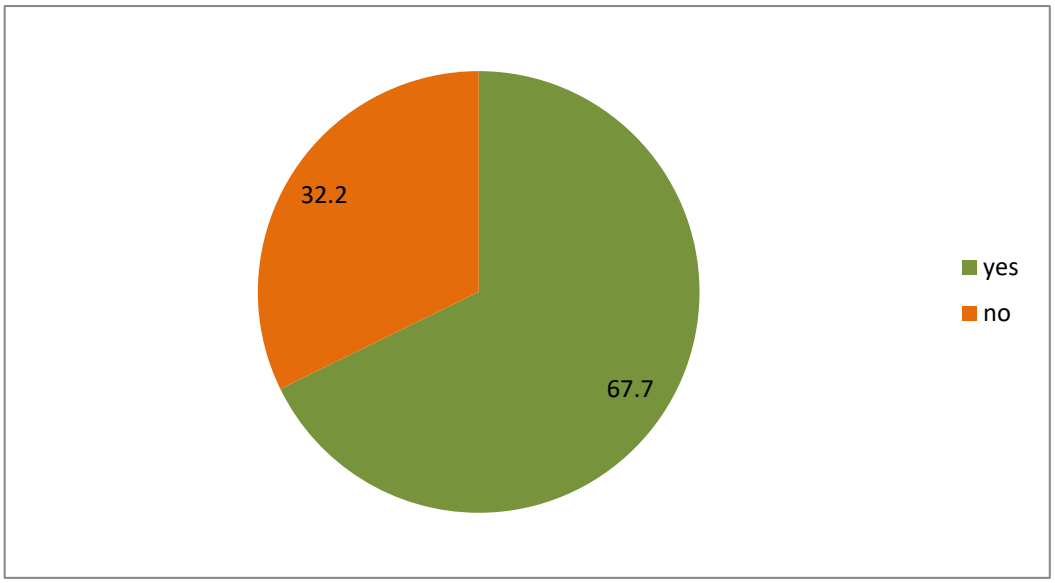
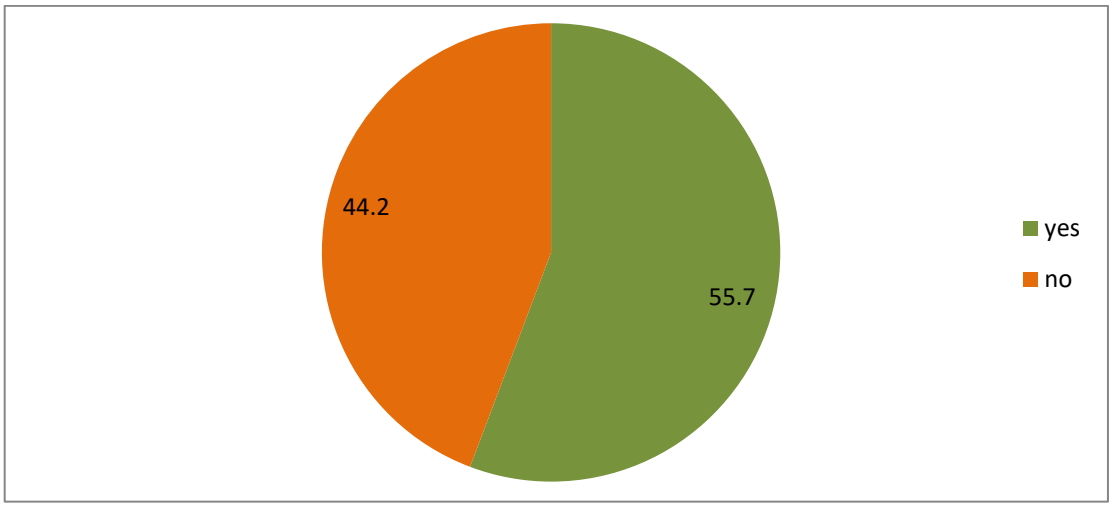


Figure 3.3 shows that 67.7% of the workers were under debt of some kind. Figure 3.4 indicates that more than half of the labourers (55.7%) are members of the Kudumbashree.

Figure 3.4 Memberships in Kudumbashree



The educational status of the women is presented in Figure 3.5. More than two-fifth (44%) of the women labourers have acquired secondary education, 22.5% got upper primary education, and 19.2% got primary education. About 9% of workers were illiterate and only 0.4% achieved a level of education of degree and above.

Figure 3.5 Educational status of the sample women

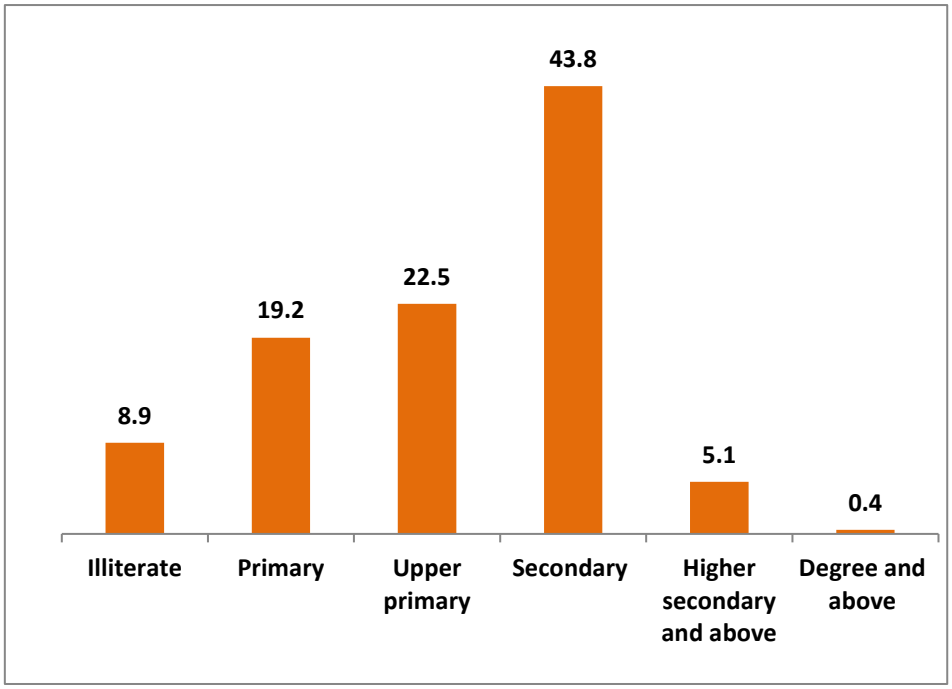
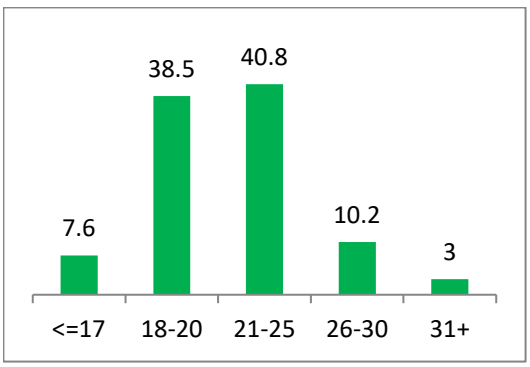


Figure 3.6 Marital status (%)

Figure 3.7 Age at marriage (%)

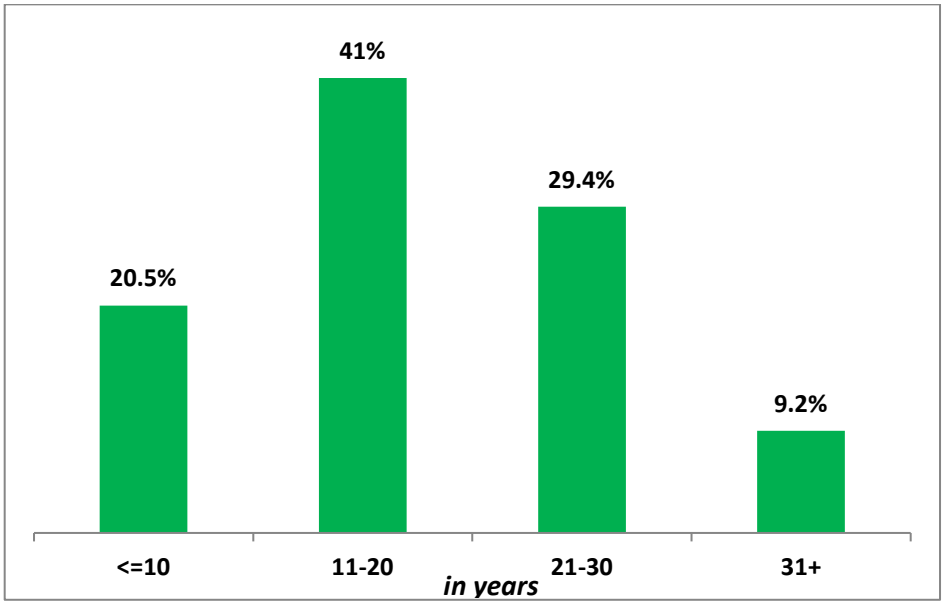


The majority of the women were married, and the mean age at marriage was 21.7 years. Above three-fourths (79.3%) of the women were married between the age group 18-25 years, and 7.6% of women married before completing their 18 years.

3.2 Employment characteristics and working conditions of women

In this section, we presented the employment characteristics and working conditions of the survey participants.

Figure 3.8 Work experience in the cashew sector



Around four-fifths of the women had more than 11 years of work experience in the cashew industry. The mean years of experience is 20.4 years.

The distribution of women by type of job and poverty status is given in Figure 3.9. The proportion of women from BPL category was higher in shelling. In grading, peeling, and cutting, the proportion of women from APL category was higher.

Figure 3.9 Distribution of women by type of job and poverty status

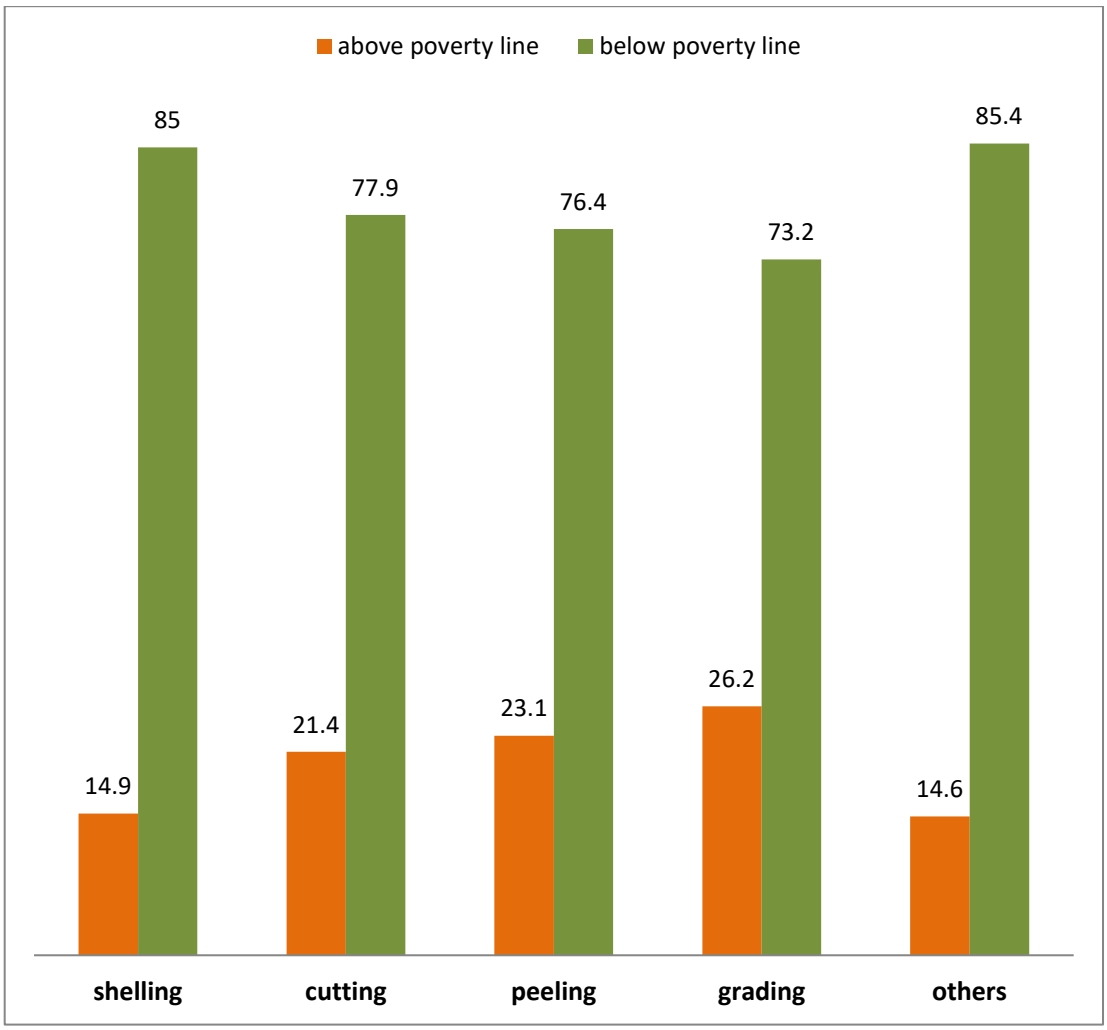


Figure 3.10 presents the educational distribution of sample women by their type of job. More than half (55.7%) of illiterate women were working in the shelling section. Women with higher levels of education were working in the grading section.

Figure 3.10 Educational attainments of the women by their type of job

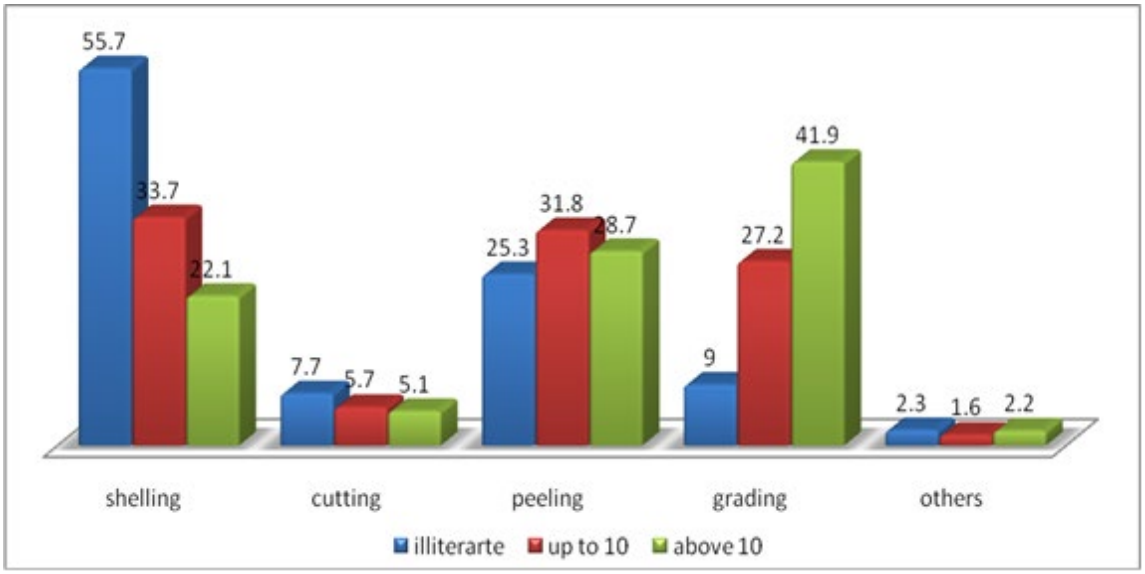


Table 3.3 Working positions of women workers

Working positions	N (%)
Sitting/squatting on the floor	1512 (61.1)
Sitting on chair/bench	863 (34.9)
Standing	95 (3.8)
Others	6(0.2)
Total	2476(100)

More than three-fifth of the women reported that they performed their job by sitting/squatting on the floor. Around 35% of the women were doing their job by sitting on a chair/bench and 4% of the women reported to have worked standing,

The majority (91%) of the women reported that they engaged in fully manual labour (Figure 3.11). About 3.2% of women engaged in activities mainly done using machinery, supported by manual labour, while 6.2% mostly engaged in manual activity with machines' support.

Figure 3.11 Types of activity involved in the labour

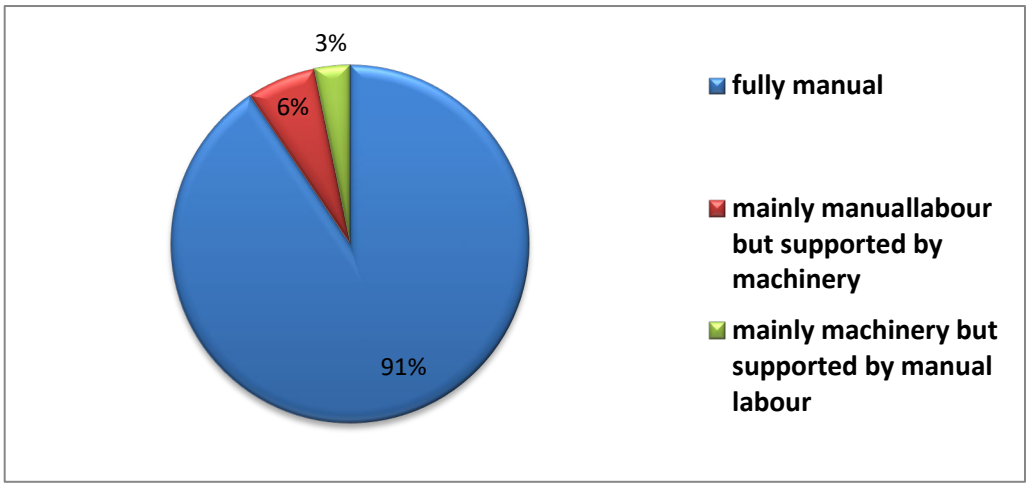
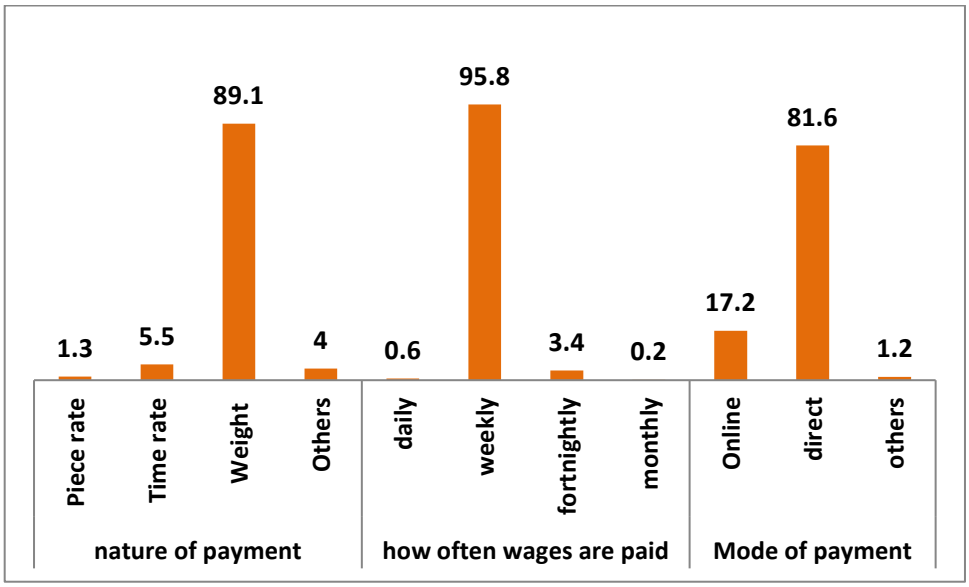
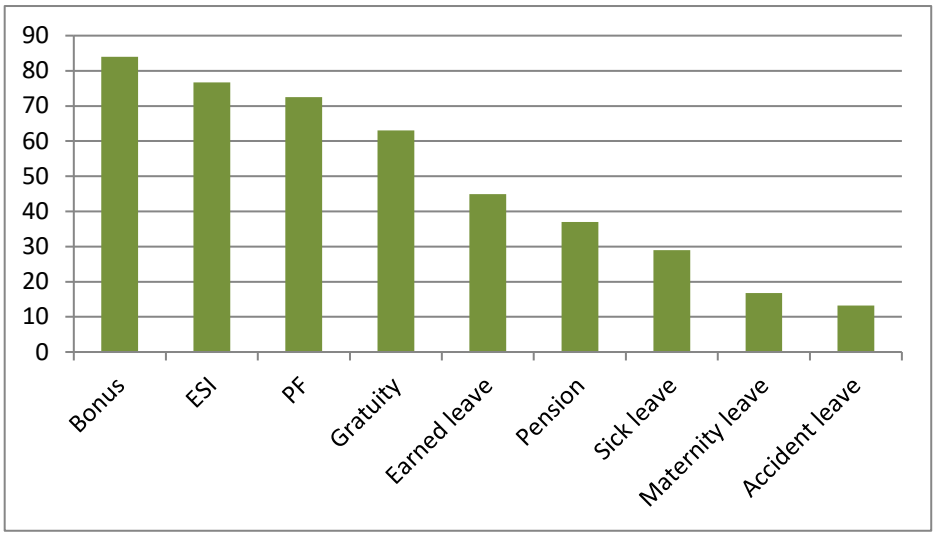


Figure 3.12 Nature of payment of wages, frequency of wages paid and mode of payment



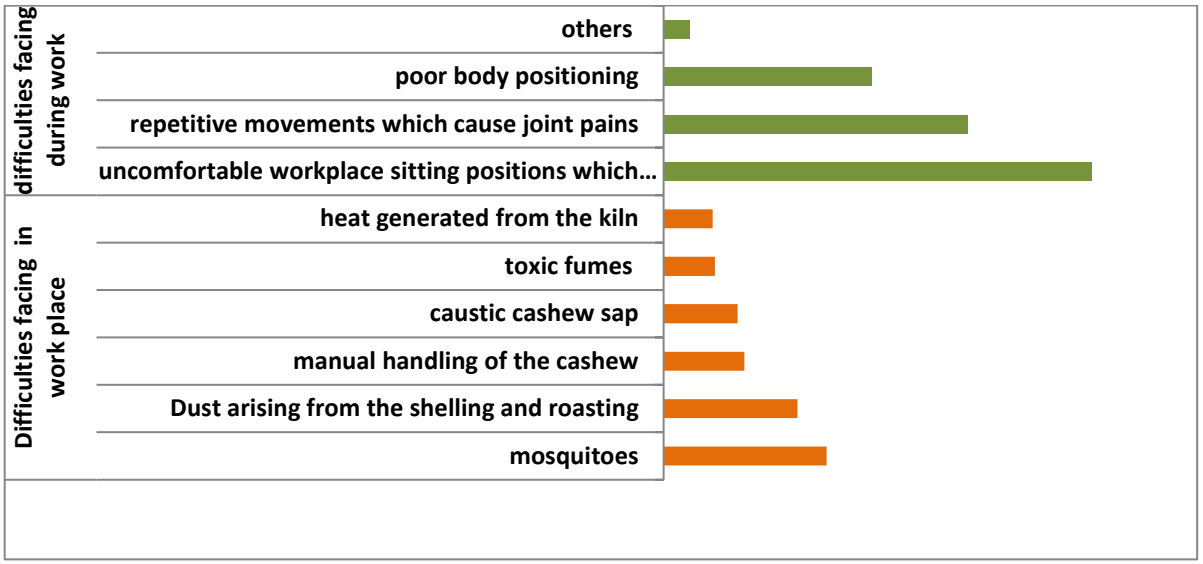
A high proportion of women were paid based on the weight of the product. Mostly the wages were paid weekly. The majority were paid directly (81.6%) and 17% of the respondents were paid in online mode. The main reason for the deduction in salary reported by the women was the absence of work, lower output, and lower quality of output including damage of nuts.

Figure 3.13 Type of benefits



The majority of the workers (84%) gets a bonus from their factory, 77% gets Employees State Insurance (ESI) benefits, and 73% gets the Provident fund (PF).

Figure 3.14 Difficulties in workspace



More than two-thirds of the labourers (72%) engage in uncomfortable sitting positions during work. About half of the women reported repetitive movements and around 35% of the women reported poor body positioning during work. Approximately 27% of women face the problem of mosquitoes in the workplace.

Around four-fifth (80%) of the women reported that they were not allowed any change in the nature, intensity, or duration of work even when they experienced any difficulties due to health issues. The majority of the women (91%) reported that they took three breaks or rest intervals, 4% of the women took two breaks, and another 4% of women took only one break during a day at the factory (8 women did not respond to this question). Around 17% of the women skipped breaks or rest intervals. The reasons reported for skipping the rest intervals were to do more work or to complete a stipulated amount of work so that they can more wages.

Table 3.4 Availability of facilities

Availability of facility	N (%)
Sufficient, separate and hygienically maintained toilets/latrines for women	
Yes	1546 (62.4)
No	930 (37.6)
Sufficient lighting	
Yes	2105 (85.0)
No	371 (15.0)
Proper ventilation	
Yes	1997 (80.7)
No	479(19.3)
Adequate space in resting room/place	
Yes	1194 (48.2)
No	1282 (51.8)
Drinking water	
Yes	806 (32.6)
No	1670 (67.4)
Satisfactory washing/cleaning facilities	
Yes	1229(49.6)
No	1247(50.4)
Kindergarten/ nursery/creches for children	
Yes	303(12.2)
No	2173(87.8)

Around two-fifth (38%) of the women reported unhygienic toilets at the workplace. More than half of the women reported a lack of adequate space in the resting room/place. A higher proportion of women reported that they did not have a

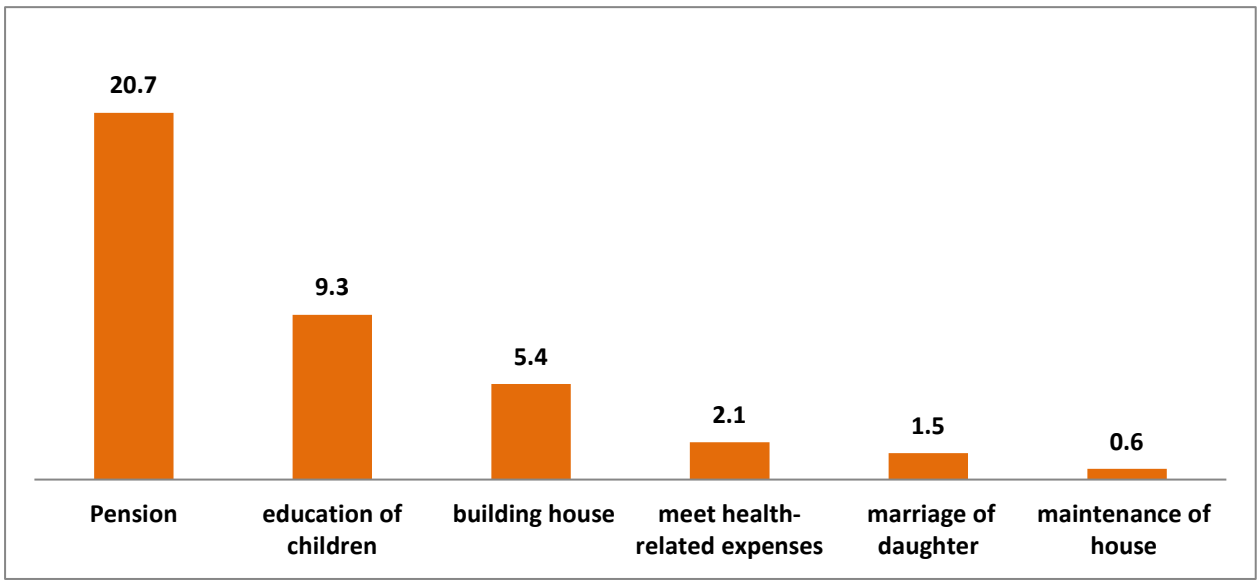
drinking water facility, and half of the women were not satisfied with the washing and cleaning facilities. Only a small proportion of workers reported that they had the facility of kindergarten/nursery/creches for children.

Among the problem reported by the women, health problem was the most reported one. Other major problems reported were low wages and insecurity in the job.

Table 3.5. Problems faced during the last one year at workplace

Problems faced (Multiple response)	N (%)
Health problems	1668(67.8)
Low wages/earnings	1605(64.8)
Lack of job security	755(30.5)
Late payment of wages	249(10.1)
Had to work when sick	86(3.5)
Verbal abuse	62(2.5)
Delay in getting wages/payments	59(2.4)
Others (unspecific problems)	20(2.3)
Physical abuse	4(0.2)

Figure 3.15 Proportion who receive support/financial aid from the welfare fund



The main financial support was pension, which was received by 21% of the respondents. Around 9% reported having received a financial support for education of children and 5% received support for building house.

3.3 Ethnographic observations and in-depth interviews

Our ethnographic observations at cashew factories across the state and in -depth interviews with workers revealed that gender discrimination at work place is largely structural.

a. The **structure of remuneration**, where women are largely paid based on the weight of cashew nuts shelled, peeled or graded as opposed to a fixed salary, or according to the number of hours invested. This meant that in most places, a significant proportion of women working in the private sector willingly forwent their "voluntary" breaks, skipped food, water and bathroom breaks to work harder. We observed that they consumed little water and this was also to ensure that they could reduce the number of toilet breaks. However, women working in state-owned factories did not have many of these concerns since they had greater job security, better wage structure and working conditions.

b. There was a clear disparity in the **physical and material circumstances** available to workers from the state-owned factories compared to those from the private factories. The hardest of the three main tasks assigned to women was shelling, which required them to constantly sit in the same uncomfortable positions for long hours. In many private factories, women sat on unclean and uneven mud floors. In addition to the ergonomic pressures, this work had them exposed to corrosive cashew nut oil, which was extremely irritating to the skin. The hands of the workers had to be cleaned meticulously to consume food as they were dirty and this required long time and considerable amount of water. This meant that the majority of them ate with unclean hands and few younger women even skipped lunch. Some used mortar to ensure that the oil did not stick to their hands while shelling, which created allergies and respiratory trouble. The private factories did not provide any personal protective equipment to the workers and some women used gloves which they purchased on their own. The toilets were in deplorable state with stinking latrines, unclean floors, dirty buckets and leaky taps. These circumstances were quite similar to those reported in a study published almost fifteen years ago among cashew factory workers of Kollam district (Thresia CU, 2007). However, many women opined that there has been a significant improvement in their working conditions in the sector over the past ten years. Many of them remembered having heard from seniors, the experience of working long hours with much lower wages under even more deplorable physical circumstances.

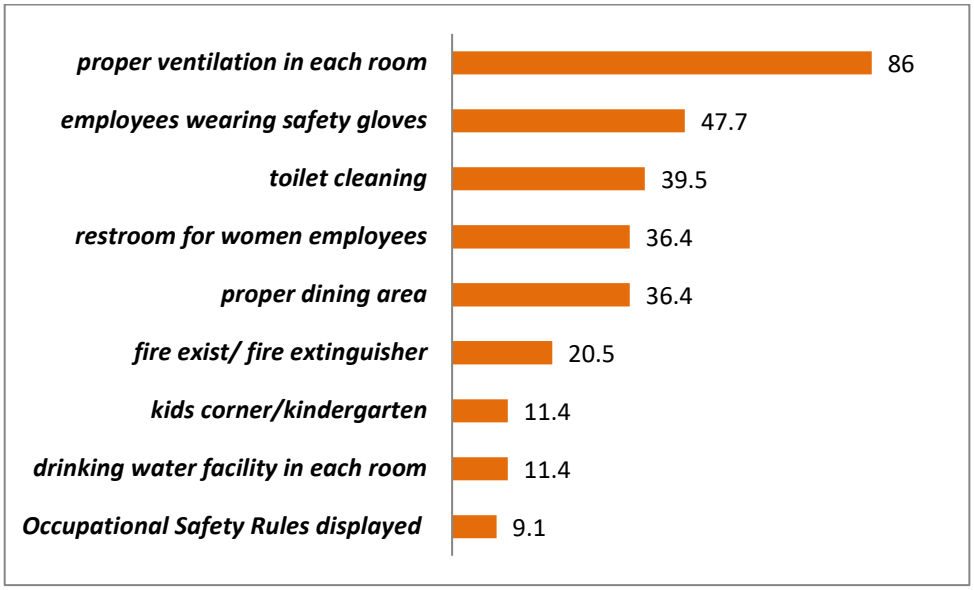
"If you ask me about the work circumstances, I will say that they are hard and there is suffering. There is a lot of pollution and heat. The buildings are covered with sheets as roofs and 40-50 women are sitting in these crowded rooms where we are working. The heat, the dust and the hard work… Now because of corona, for the past few days we have been working with masks and that has been helpful in protection from the dust for many working in shelling. We have to work to run our families. What else can be done?"

- *Middle aged woman engaged in shelling in a private factory*

c. Based on the observations made by the data collectors, the **infrastructure and basic facilities** in the surveyed factories were assessed and we found that in majority of the factories, occupational safety rules were not displayed. Drinking

water facility was not available in every room where workers assembled. Proper dining areas, rest rooms for women employees, children's play areas, fire exits/extinguishers and toilet cleaning facilities were absent. However, majority of the factories had proper ventilation and nearly half of the workers wore gloves, although the gloves were not provided to them by the employers. The workers themselves had procured the gloves in many settings.

Figure 3.16 Facilities in selected factories: Findings based on observation



d. Another observation was regarding the **workers engaged in shelling**. There was no rotation system in many factories and the same women, predominantly from extremely poor, illiterate and Dalit backgrounds dominated the workforce engaged in shelling and had been working in it from the beginning throughout their working careers.

"There is no rotation system in our factory. Shelling is the hardest and those who do shelling will continue to do shelling. It breaks the back and feet and neck and it doesn't earn well. I think some people who have some influence can demand that they want to do something else, but if you ask me, I have wanted to shift, but I couldn't. My mother also worked in shelling all her life. Now it is me. I wish I got proper education in life. I wouldn't have been stuck here.

– *Young woman engaged in shelling in a private factory*

e. The **casual labourers** who were not registered with any access to benefits like Gratuity and Provident Fund, Employees State Insurance Scheme, Daily Allowance and pension available to registered employees shared their insecurities. Many of the workers could not even write their own names and did not have a clear idea regarding the procedure of being registered employees. Many have been informed by the factory management that their applications are being processed; however, they suspected that the procedures were unduly delayed to deny them their benefits, although they had no way to substantiate these suspicions.

"They told me six months back that I will be permanent. But nothing has happened yet. Then corona happened and now I don't know. I have worked here for almost ten years. I took a break from the company at my old house and then joined here. I was registered there. But because of the break I became temporary again. I don't know if they will make me permanent. I don't know why it is delayed."

- *Young casual labourer engaged in shelling in a private cashew factory*

f. The **effeminization and internalization of gender and caste stereotypes** related to notions of purity were also reflected in their narratives pertaining to the poor working conditions and employment circumstances. The women expressed unhappiness over the working conditions but also had a certain acceptance or resignation to their situation, which was partly guided by the notions related to their identities and partly by the anxiety and insecurities due to the crisis which has befallen sector. Many of the women we spoke to were actually "bread winners" of their families for years, yet perceived the poor labour and employment circumstances as "expected".

"I have been in shelling from the beginning. Look at my hands (she holds her hands up, which are unclean from the stains of the corrosive oil). Yes, it is hard and there are difficulties. But what else to do? I had stopped coming here for a while and things got really bad at home. I did not give advance "leave" to the company and so due to the break, now I am again temporary. I am not very bothered about cleanliness and beauty and all that. I can't be. I work and then I eat. No point cleaning also. Tomorrow I have to do it again. I have to keep working. My kids will go hungry otherwise".

- *Middle aged woman engaged in shelling in a private factory for almost two decades*

"Things are not easy. But we don't want to lose the job. It is not easy outside to get jobs. Then this corona problem and there is no work. We can't sit at home. It was another thing if the men at home earned. Now they don't. I think, whatever little we get is enough, but at least we get something. I get up at 3 in the morning, make everything ready, take two buses and come here. By the time I reach home, it is almost seven. Then there are things to do at home. If we say something and you write something and company faces some problem means…"

- *Middle aged woman engaged in shelling in a private factory*

"I have worked in this for a long time. I don't have much time left. So, I don't have much to say. The difficulties in the job are part of our life. We are poor people. What more can we expect? Of course, we want more salary. We wish we get the salary and the benefits of women working in the corporation companies (state-owned factories). They have pension also. They won't give it to us. Why would they?"

- *Elderly woman engaged in grading in a private factory*

"I am working in shelling for about sixteen years and I get paid Rs 30/- for one kilo of shelled nuts. I am permanently working with ESI card, welfare fund and so on. Per week they cut almost Rs. 200/- from what I earn for all these. If I work for all six days, I may be able to earn about 1000/- per week, so about 4000/- a month. How can we live with that money?"

- *Middle aged woman engaged in shelling in a private factory*

g. Many participants opined that although women cashew workers did have some **representation in trade unions** and they had been having conversations with conveners and leaders on improving their basic working conditions, they did not have adequate representation or power to bring about a lot of fundamental changes. Many felt that there was not much they could do as a woman-dominated industry, which was already in crisis. The managements of many factories had informed the union leaders that since the sector was going through a crisis, they won't be able to support the workers any more than what they are doing currently. Although now there are more men compared to before, they are mostly migrant labourers and they have little power for negotiation. They felt that if change had to happen to their working conditions, it had to come through state intervention and

not through collective bargaining. The gender stereotypes which have played a critical role in the informalization of labour and in accentuating the vulnerabilities of women seem to have played a major role in reducing their representation and leadership roles in trade unions also. While women labourers lamented the lack of time in the overstretched schedules, which have limited their abilities to be political, men opined that political activism may not be possible for everyone due to its unique pressures and requirements.

> Our bathrooms were really bad in the past. We constantly had conversations with the factory owners through the union and now that is sorted. Then we don't have a place to sit and have lunch, a shed or some decent place. Our conveners are constantly talking to the management. But we can only tell them. So, then we clean up some place and sit there and eat. If we have any problems, we usually phone the union leaders and tell them and then deal with it... It is true that the actual representation of women working in this sector in trade unions is less. But they select local conveners to act as connection between the unions and the workers and I am a convener like that. One reason for why we don't want to come forward as leaders is because we are women. We have work at home, at company. Being in a leadership position means, we have to attend all those meetings, go to the committee office and so on. None of us have that kind of time. Also, when we approach the owners as union leaders, we will be on their radar and many of us don't want that".
>
> - *Convener of women workers at a private factory*

> We have not been getting our deserved rise in DA and they are also not giving us our paid leaves. We deserve thirteen paid leaves a month. But that is also denied to us over the past few months. Now instead of shelling, now we are expected to do machine cutting of nuts and the remuneration for that has not been decided by the government. The owners themselves decide the remuneration for this task and we are expected to shell about 57 kilograms of raw nuts a day. The workload is very high and we are not paid in accordance. Then we get a maximum of about 290 -300/- per day. It is such a loss for a worker. Can a family survive with this money? But unfortunately, we can't demand, because they say that the sector is in crisis.
>
> - *Middle aged woman engaged in mechanized shelling in a private factory*

"Young men are not willing for trade union activism these days. Then would women be willing? It is something we should examine. Also, most people perceive trade unionism, especially in the cashew sector as something old and unrefined. We have to reach the factory door step in the morning, see if the workers are joining for work, if not ensure that they are granted leave, then deal with issues related to their ESI cards or any work place conflicts. So you have to actively intervene in the day-to-day activities of the workers. Only those workers who have the ability to do this, can be leaders. It is not easy for everyone. We are not even getting men, then how can we expect women?"

- *Middle aged male trade union leader engaged in the cashew industry*

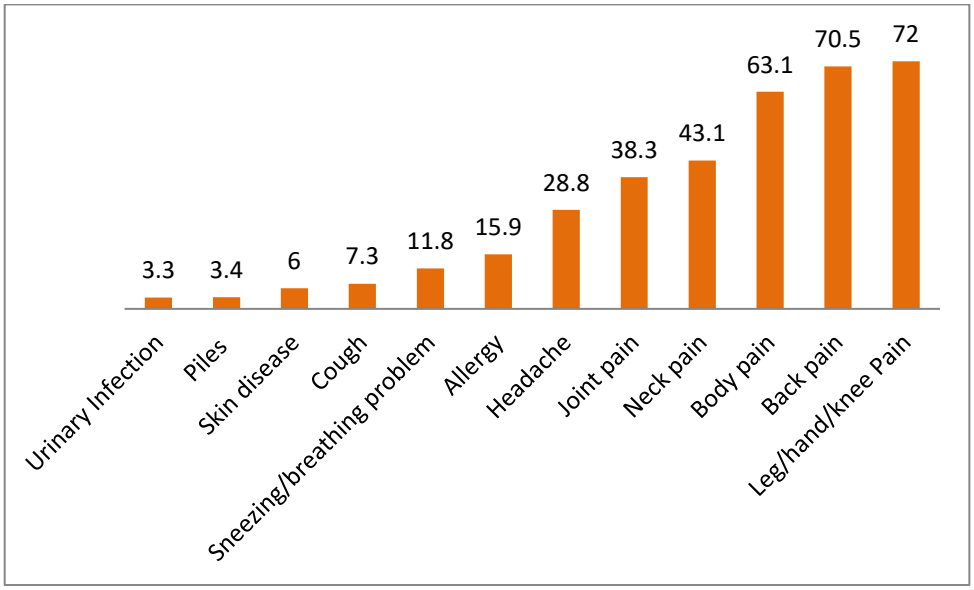
4. Health Status and Health Care Utilization: Findings from the Study

This section presents the survey findings on health status and health care utilization of the study. The participants' health status is divided into four major sections; occupational health problems, reproductive morbidities, mental health morbidities and other morbidities. Due to the job characteristics, the workers in the cashew processing industry are exposed to health risks. Smoke emission from furnaces, contact with liquid cashew nutshell, unhealthy sitting position, avoidance of rest periods to optimize production, unhygienic atmosphere in a factory section, and the chances of accidents make workers vulnerable to health problems in the cashew sector.

4.1 Occupational Health Problems

Women's main occupational health problem was musculoskeletal problems. Among them, leg/hand/knee pain and joint pain was the highest followed by back pain and body pain.

Figure 4.1 Prevalence (%) of occupational health problems



Around 12% reported that they had no health problem at present, 11% had one problem, and 77% had multiple problems (more than one problem).

Figure 4.2 Distribution of women having occupation-related health problem

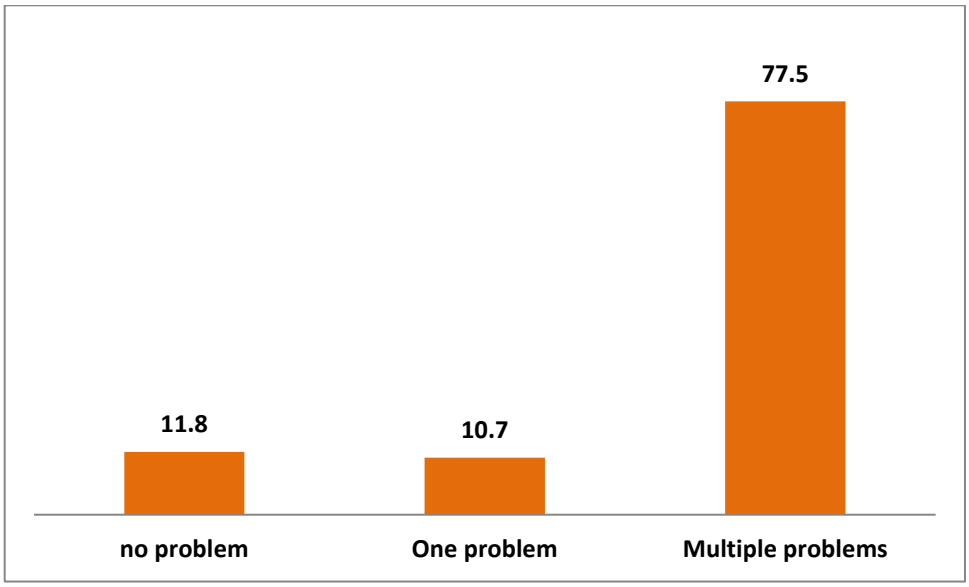


Table 4.1 gives details of occupational health problems by type of job. The pattern of health problems is almost the same in different occupational groups.

Table 4.1 Distribution of women by major occupational health problem and type of job

Occupational Health Problem	Type of Job				
	Shelling	Cutting	Peeling	Grading	Other
Body pain	20.3	20.1	20.2	19.3	18.0
Leg/hand/ knee Pain	23.1	23.3	23.4	21.6	22.6
Back pain	22.6	21.2	22.8	21.7	22.6
Joint pain	11.4	12.7	11.6	13.6	10.5
Neck pain	14	12.7	13.2	13.8	14.3
Headache	8.5	9.9	8.8	9.8	12

4.2 Reproductive Morbidities

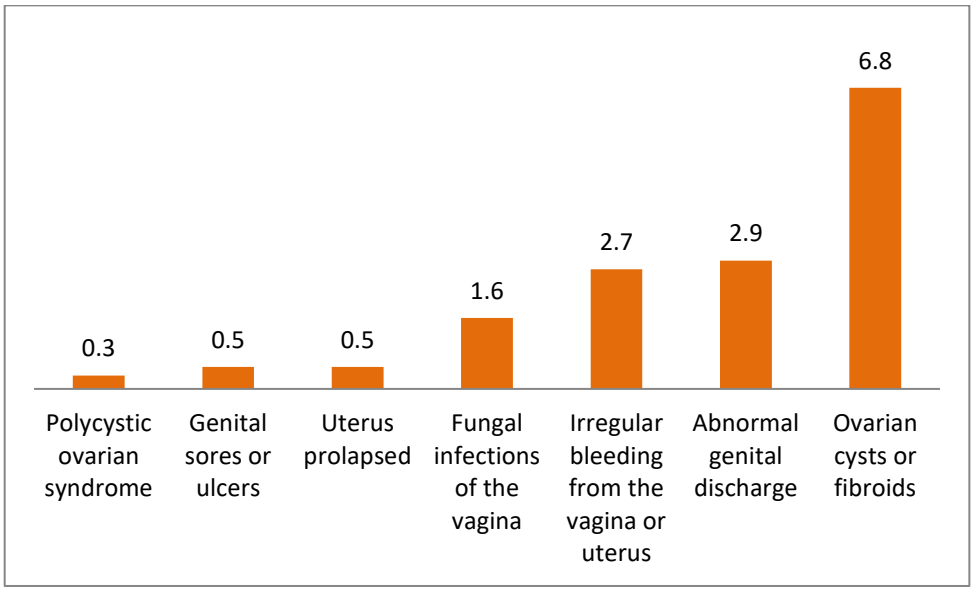
We collected the details of reproductive health problems, including menstrual problems and reproductive morbidity was gathered. The majority of the women reported that they have no menstrual problems, 21.1% had at least one problem, and 6.4% had multiple problems. Painful periods (14%) and irregular periods (8.4%) are the most common menstrual problems among the workers.

Table 4.2 Problems related to menstruation

Problems	N (%)
No period	45(6.5)
Irregular periods	58(8.4)
Painful periods	97(14.0)
Prolonged bleeding	24(3.5)
Scanty bleeding	16(2.3)
Inter menstrual bleeding	6(0.9)
Blood clots	33(4.8)

Approximately 14% of women reported at least one reproductive morbidity. Figure 4.3 detailed the reproductive morbidities among women workers. The most common reproductive morbidities reported by the women were ovarian cyst or fibroid, followed by abnormal genital discharge and irregular bleeding from the vagina. About one-third of the workers engaged in grading and shelling have at least one reproductive morbidity.

Figure 4.3 Reproductive morbidities reported by sample women



Reproductive morbidity was highly reported among women in the shelling, grading, and peeling jobs.

Figure 4.4 At least one reproductive morbidity by type of job

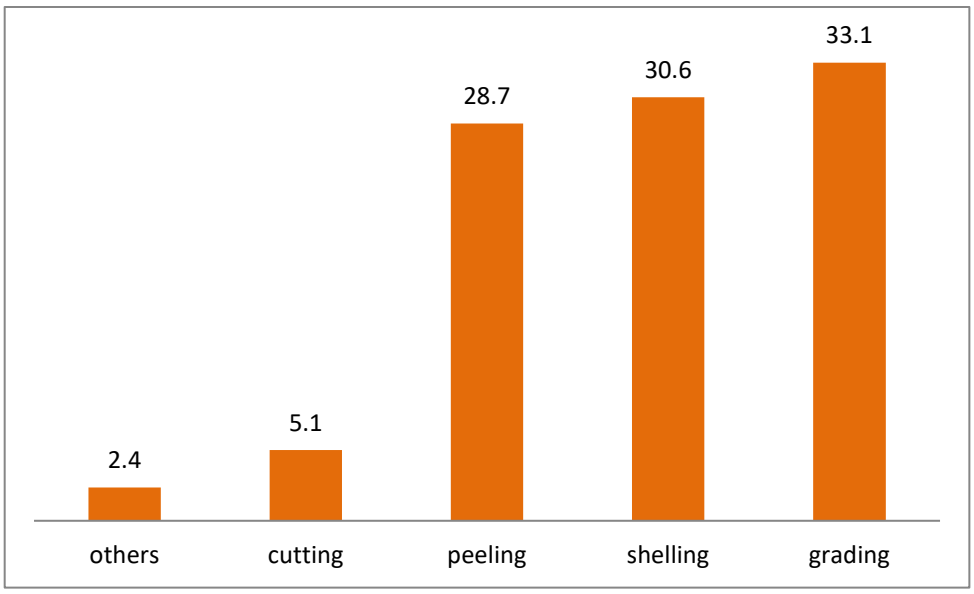


Table 4.3 Proportion of women's reproductive morbidity by type of job

Reproductive morbidity	Shelling	Cutting	Peeling	Grading	Other
Irregular bleeding	12.3	20	15.2	17.1	22.2
Ovarian cyst/fibroid	40.8	35	39.2	37	55.6
Abnormal genital discharge	17.7	10	18.4	15.8	11.1
Genital sores or ulcer	3.1	5	1.6	3.4	0
PCOS	0	0	0.8	3.4	11.1
Fungal infection	10	5	6.4	11.6	0
Uterus prolapse	3.1	0	4	2.1	0
Others	13.1	25	14.4	9.6	0

4.3 Mental Health Status

The four-item patient health questionnaire (PHQ-4) was used to assess anxiety and depression. High anxiety was reported among 16% of women and high depression was reported among 14%. Mild psychological distress was reported by 21%. A small proportion (9%) reported moderate and severe psychological distress (5%) (Figure 4.6).

Figure: 4.5 Anxiety and depression levels

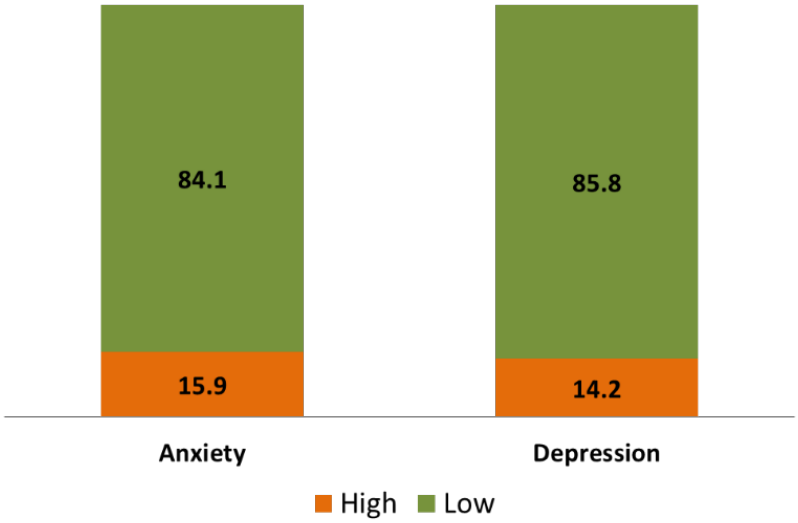


Figure: 4.6 Psychological distresses

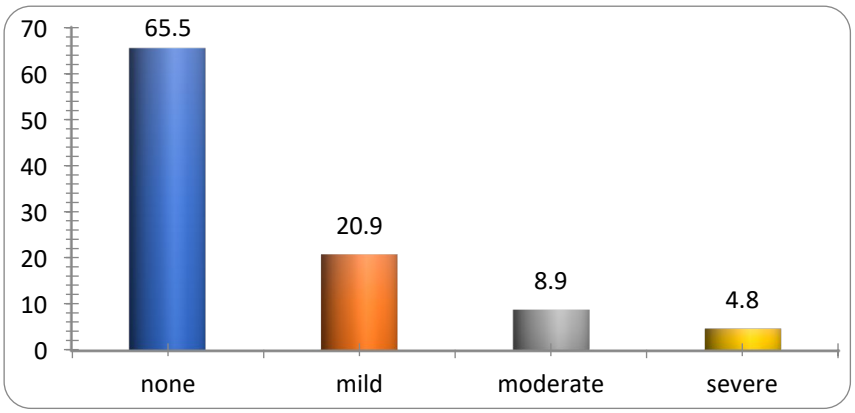
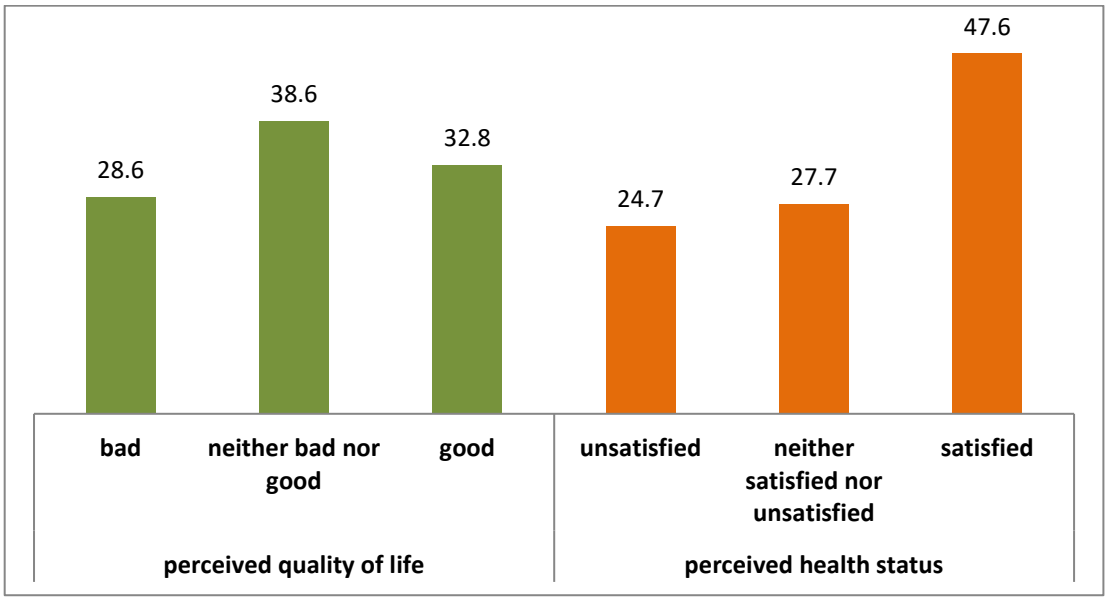


Figure 4.7 presents the quality of life and perceived health status of the study participants. Approximately 33% of women reported good quality of life and 29% reported poor quality of life. Nearly 48% of women perceived their health status as satisfactory.

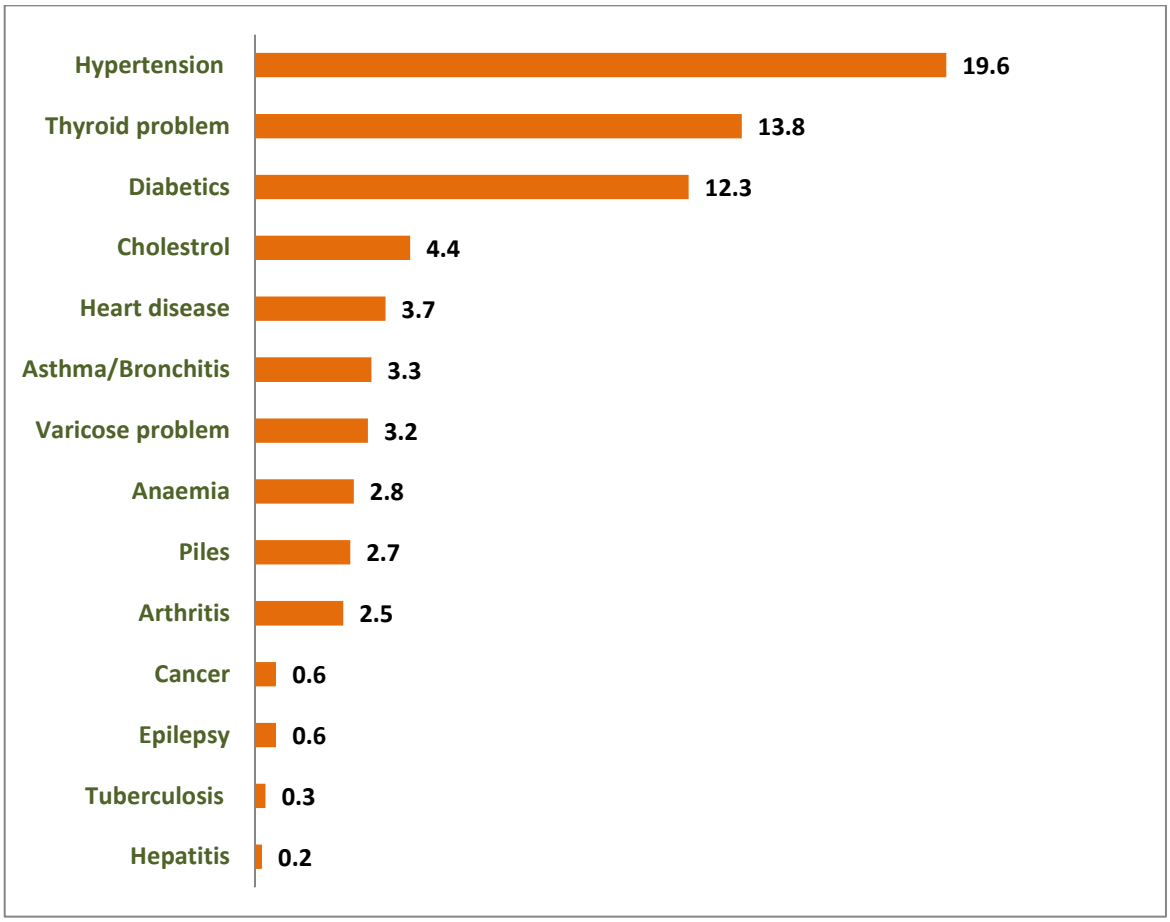
Figure 4.7 Quality of life and perceived health status



4.4 Other Morbidities

We assessed the details of other diseases present at the time of the survey. The most-reported morbidities were hypertension (19.6%) followed by thyroid (13.8%), diabetics (12.3%), hypercholesterolemia (4.4%), heart disease (3.7%), asthma/bronchitis (3.3%) and varicose problem (3.2%).

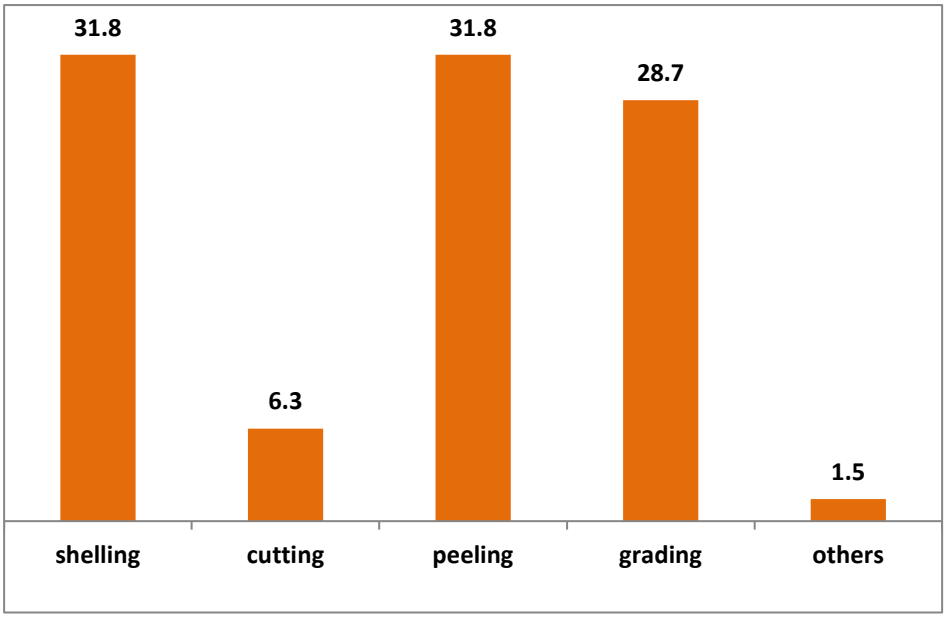
Figure 4.8. Prevalence (%) of diseases



4.5 Nature of Employment and Health Problems

Among the different occupational groups, the proportion of women who had at least one morbidity was highest among women in shelling and peeling followed by grading (Figure 4.9).

Figure 4.9 Proportion of women who had at least one morbidity by type of job



Prevalence of disease in different occupation group is presented in Table 4.4.

Table 4.4 Prevalence of disease in different occupational group

Morbidity	Type of Job				
	Shelling	Cutting	Peeling	Grading	Other
Heart disease	4.5	0.7	2.7	4.4	2.4
Hypertension	16.1	20.0	24.4	19.2	9.8
Diabetics	9.1	13.1	13.6	14.9	7.3
Anaemia	2.0	6.2	1.7	4.3	4.9
Asthma/Bronchitis	3.1	0.0	3.9	3.8	0.0
Thyroid problem	12.1	15.2	12.6	16.9	19.5
Piles	1.8	2.1	1.9	5.1	2.4
Varicose problem	2.2	6.2	2.5	4.4	9.8
Cholesterol	4.4	2.8	5.8	3.4	0.0

The prevalence of heart disease was comparatively higher in the shelling group. Hypertension prevalence was highest in the peeling group, followed by cutting and grading. Diabetes prevalence was highest in the grading group.

Leg/knee/hand pain, back pain, body pain, neck pain, joint pain, and headache followed by an allergy due to the corrosive oil from the raw nuts and dust were the commonest occupation-related health problems. The probability of having at least one occupation-related health problem, reproductive morbidity, menstrual problem and general morbidity was found to be highest among those engaged in the shelling, followed by those engaged in peeling and grading. However, the major occupation related health problems did not seem to vary across the different types of jobs significantly. The prevalences of hypertension, thyroid problems and diabetes mellitus were found to be higher among cashew factory workers.

"Instead of asking me where it hurts, you can ask me, where does it not hurt (laughs). Because it hurts everywhere".

- *Middle aged woman engaged in shelling in a private factory*

The workers themselves attributed their health concerns, particularly occupation-related health concerns to the hard physical labour associated with their work. Pain seemed to be a constant reality of their lives and almost all of them have habituated to live and work through pain.

"This work is hard. This sitting position, this rough surface and the long hours. By the time I reach home, I just want to faint. But then there is work there too. We need to get up the next day again at 3 in the morning and come here. Already there are few days of work. If we say pain and miss work, who will feed us".

- *Middle aged woman engaged in shelling in a private factory*

"*There are no infections or anything among the workers. Yes, they may be having back pain. That is part of their job. But no one has till date told me that they have back pain or any such problems. If they have pain, then of course they have ESI. They can always access health care. For some cases, older women and so on or those with health issues, we do provide chairs and tables for working."*

- *Representative from the management of a private cashew factory*

The hectic work schedules placing pressure on their lifestyles and lack of regular health care are also factors that influence the health status of the women workers

"Many of these women face a major issue because they don't regularly check their health parameters and by the time they check it will be in a uncontrolled situation. So, we are planning to introduce a monthly check up for blood sugar, blood pressure and cholesterol using a mobile medical unit. It is already there, but now we are planning to regularize it. Many also come from far off places. They may have to take two or more buses to reach the factory at 8. So, they won't eat anything in the morning. Then during work they consume less food and water to make working easier and to keep their breaks shorter. So, they are at a higher risk for under nutrition and anaemia. We have started Thulyatha classes for women to enhance their literacy in conjunction with the state literacy campaign."

- *Representative from the management of the public sector corporation*

4.6 Health Care Access and Utilization

We collected details of health care access and utilization among the survey participants. Around 87% of women workers have registered in the health insurance scheme. Among them, more than half were registered in ESIS scheme, while almost a third (32.3%) were enrolled in the Ayushman Bharat Scheme. Around 12% of women have other health insurance schemes. The main source of treatment was the nearest ESI hospital or nearby government facility.

Table 4.5 Access to health insurance

Have health insurance	
Yes	2176 (87.9)
No	300 (12.1)
Type of health insurance scheme (N=2176)	
Ayushman bharath/karunya	703 (32.3)
ESIS	1211 (55.7)
Others	262 (12.0)

Those who were not depending on ESI facilities, reported various reasons like their ineligibility to avail the facility and difficulty in accessing the ESI facilities as reasons, while some preferred private health care facilities to ESI.

4.7 Barriers to Health Care Utilization

The barriers faced by women workers in utilizing health care services have been explored through open ended-questions and the responses were subsequently coded (Table 4.6). According to the participants, the barriers are broadly of two types – work-related barriers, health system related barriers and personal barriers. Many participants also responded that they chose to avoid health care visits for no particular reason.

"Doctor may not be present when we reach there (ESI hospital). Sometimes they will say this medicine is not here. They will get money from us and there won't be medicines. So, then we will waste so much money and time and go there and will have to return empty-handed or buy medicines from outside. Or we will have to go to other hospitals in private. Only if we give "leave" in advance and we have an ESI note, we will get wages for the days lost at work. Also, if we take a long break without giving "leave" in advance, then we will lose our permanent jobs. Then we should be temporary workers without any benefits."

- *Eldelry worker engaged in shelling in a private cashew factory*

"I am not a registered worker. I was earlier but then after marriage I stopped working. Here I am new and I don't have a card. So, I don't have the treatment card (ESI). That is an issue because I have thyroid problem and needs medicines. I go to the government (hospital) near my house, but there things are not in order. I won't get medcines always. And private treatment is not something I can afford… yes, finding time to go to the doctor is a problem. Also, because there is so much waiting required. So, on whole day is gone if we decide to go for a checkup."

- Middle aged woman working as a casual worker in a private factory

Table 4.6 Major barriers to health care utilization

Work-related	Health-system related	Personal
➢ Avoid health care visits to attend work and get full wages ➢ Do not have an ESI card (Casual workers) ➢ Awaiting the ESI card and cannot afford health care ➢ Delay in receiving the ESI card and cannot afford health care ➢ Technical issues with the issued ESI card preventing its usage in a ESI hospital ➢ Avoid health care visits to attend work and get full wages	▪ Doctor absent in ESI hospital/nearby government hospitals ▪ Negative attitude and rude behaviour of health care professionals including doctors ▪ Complete or partial unavailability of medicines	• Economic constraints – cannot afford the indirect costs of transportation to health care visits • Loss of employment in the cashew industry due to the current crisis and cannot afford health care outside ESI • Do not have time for health care visits due to the competing priorities of work-life • Have not yet applied for the ESI card and cannot afford health care • Economic constraints – cannot afford the indirect costs of transportation to health care visits

5. CONCLUDING OBSERVATIONS

Precarious Employment and Embodied Pathways of Poor Health among Women Workers in the Cashew Processing Industry of Kerala

This sequential exploratory mixed-methods study was conducted among women workers engaged in cashew processing factories of Kerala, to assess the health status of the workers and to explore the impact of their living and working conditions on their health. The study findings unequivocally suggest the precarious employment circumstances existing in the cashew processing industry. The findings also clearly suggest that these circumstances have been embodied by the working women which manifest as a range of health concerns including occupation related morbidities, reproductive morbidities, mental health concerns and non-communicable diseases. The overwhelmingly significant proportion of the ownership of ration cards, high enrolment in health insurance and high reliance on public health care facilities are the major silver linings.

Both Lindberg (2005) and Thresia (2007) critically examines the celebrated development paradigm of Kerala, which, despite larger achievements in social sectors, have failed to politicize the gender and caste stereotypes in the society, indirectly paving way for the continued capitalist exploitation of women working in this sector. This has led to the creation of specific pockets of inequalities among different population groups in the state due to sustained marginalization, exclusion and discrimination across castes, genders, classes and regions.

Through this enquiry, it was clear that the employment of women workers engaged in the private cashew factories have the characteristics of precarious environment - employment insecurity, reduced organization of workers, reduced opportunities for collective bargaining, weak, individualized bargaining between workers and employers, low wages, economic deprivation, restricted workplace rights and social protection and powerlessness to exercise workplace rights. The structural nature of gender discrimination in the industry is best exemplified by the nature/structure of remuneration offered to the women workers – predominantly based on the weight of nuts processed.

As proposed by the theoretical framework proposed by the Employment Conditions Knowledge Network (EMCONET), precarious employment in the sector contributes to the negative/unhealthy exposures and risks and consequently poorer health outcomes. Trade unions had low representation of women from the cashew processing industry, primarily because the overworked women did not have adequate time to deliver the responsibilities of "political" workers in leadership positions. In addition, the women also expressed that the narrative around the aggravating crisis and impending doom of the sector, affected their ability to collectively bargain and negotiate with the entrepreneurs for genuine demands like an increase in daily allowance, clean dining areas or safe and healthy work atmosphere. The popular gender stereotypes regarding "feminine" endorsing a supplementary role for women's work, extreme poverty and notions of purity surrounding caste stereotypes have also played significant parts in shaping the resignation or acceptance of women to their plight in the industry. These stereotypes also seem to have an impact the way trade union leaders and entrepreneurs perceive their situation, rights and entitlements.

Casual workers, although relatively low proportion among our study participants are facing exclusion in terms of health care access and other benefits. Many participants suggested that their regularization is impending and it is almost completely at the mercy of the factory management. The thrust by private factory managements is on informalization of labour for profit-maximization through non-registration of workers in their factories, thereby creating an unregistered workforce within the registered workforce or an informal sector within the formal sector. This has not only denied these casual labourers their rights, but has also prevented the industry from transforming into an organized industrial cluster in the region. The KILE report of 2019, in fact, identifies this tendency towards informalization as one of the endogenous factors that has contributed to the crisis in the industry. The business environment that supports the productivity of any industry is the presence of *clusters* of related and supporting industries, which are "geographic agglomerations of companies, suppliers, service providers, and associated institutions in any field linked by externalities and complementarities of various types that enhances productivity and performance." The report observes

that the cashew industry could not explore the advantages of being an industrial cluster due to the informalization of labour.

Although few studies have explored the health situation of women cashew workers in the state, a quick comparison of the broader patterns in our study with the two major studies have been published in the past two decades (Thresia CU, 2007 & Nelson V et al., 2016), could provide us with better directions about what has changed and what has not. The self-reported occupational health related problems among the women cashew factory workers of the state echo the findings of the previous studies done in several aspects. Musculoskeletal problems in the form of back pain, leg/hand/wrist pain, knee pain and neck pain constitute a major share of the health problems among this group of workers and this has not changed over the past two decades. Musculoskeletal problems were naturally higher among those engaged in shelling, the most intensive task in cashew processing involving long hours of physical labour. The participants vocalized their experience of living and working with the constant reality of excruciating physical pain, which is a clear demonstration of how their bodies have biologically incorporated or embodied their working conditions. It is also critical to juxtapose this with the realities of "who they are" – poor, rural women predominantly from Dalit/Adivasi/Other Backward communities with poor social and economic capital and educational achievements. The intersections of their class, regional, caste and gender identities make them much more vulnerable to the economic ravages of labour exploitation and consequently negatively affect their mental and physical health. A clear example of such an intersection being the disproportionately high representation of Dalit workers among those engaged in shelling. Quite expectedly, a greater proportion of the women engaged in shelling were illiterate or did not reach the level of secondary education, at least partially explaining their constraints that forced them to continue doing the hard task of shelling for years on and without any possibility of change.

It is also critical to note that, in addition to these occupational health problems, they also suffer from reproductive morbidities, mental health morbidities like depression, anxiety and psychological distress and non-communicable disease like hypertension, suggesting other potential pathways beyond ergonomics.

These include diet and nutrition, water intake, material deprivation and access to health care. While respiratory problems and dermatological problems were found to be significant concerns in both the previous studies, they were not very significant in our study. One reason for the lower proportion of respiratory symptoms could be because we had conducted the study during the Covid-19 pandemic and masks were mandatory while working in most places reducing their exposure to dust. We also observed that women in shelling and peeling did wear gloves, although they pointed out that the employers did not provide them with the necessary personal protective equipment and hence, they had to procure them on their own. Although this points to the need to enhance the labour circumstances, it also indicates a greater awareness and consciousness among the women to take care of themselves.

The study conducted in 2007 reported reproductive morbidities like leucorrhea indicative of vaginal infections, uterine prolapse and miscarriages. Ovarian cysts/fibroids were reported as the major reproductive morbidity in our study followed by vaginal discharge. Although uterine prolapse was reported, the prevalence was less than 1%. The diagnosis of cysts/fibroids was made by the doctors when the women presented with high or irregular bleeding and this is clearly indicative of high health care utilization. There were a high proportion of self-reported non-communicable diseases (NCD) among the workers in our study. This was also reported earlier where the prevalence of the reported conditions was found to be quite high. This is reflective of the overall pattern of the NCDs in the state, but also indicates better health care utilization and diagnosis of health conditions among the workers. The survey findings also reiterate the high health care utilization and an almost complete reliance on the public sector health facilities. Many women who have worked for decades in the industry did point out that ESIS has been a major boon that clearly made a difference to their lives.

However, despite ESIS, several barriers to health care utilization, predominantly work-related persists, that affect their regular health care visits and this could have serious consequences especially considering the high prevalence of NCDs. The difficulties in achieving work-life balance, subsequent time crunch, unaffordability of indirect costs of health care visits are all barriers to health care utilization by the

workers. Some health system factors like negative attitudes of the doctors and unavailability of medicines have also been reported. The potentially poor nutritional status among them due to their hectic schedules and inability to focus on self-care is another potentially important pathway to address their general health status. The poor perceived quality of life and high levels of mental health morbidities like anxiety and depression are also pressing concerns which need urgent perusal.

Limitations of the study

The field work for this study was carried out during the pandemic and that needs to be a consideration when evaluating the findings of this study in future. Due to the constraints associated with data collection during the pandemic, our initial intended sample size for the survey of 3000 could not be attended. The proportion of factories and/or workers in public and private sectors was not a consideration in sample selection. However, comparison of working conditions and/or health status of workers between the two sectors was not an objective. Many of the participants had worn face masks as part of preventive measures associated with Covid-19 and that could be one of the reasons for the relatively low prevalence of respiratory issues and/or allergies. However, prior to the pandemic, the workers did not routinely use face masks and so, this behaviour was purely on account of the Covid-19 situation. The data collected through the survey was entirely self-reported and hence, the possibility of reporting bias cannot be discounted.

6. Summary & Policy Recommendations

6.1 Summary of the study findings

In this section we briefly present the major findings from the study:

- The women workers who participated in the study were predominantly aged between 30 and 60 years (87.6%), and most hailed from rural areas (85.7%). Majority of the workers belonged to OBC/Dalit/tribal social sections (78.2%) and earned between ₹500 and ₹4000 per month (76.5%). Over two-third of the study participants had on-going debts of some sort and close to a half of them did not have even secondary school education.
- Shelling, peeling and grading were the major tasks assigned to the workers with slightly over a third of the women engaged in shelling (35%).
- Over 99% of the workers owned ration cards, which is a positive sign. Majority of the women workers, were poor, with incomes that officially fell below poverty line (80%). Women engaged in cashew processing industry were largely poor, but women engaged in shelling, the hardest task among all tasks, were the poorest.
- More than half of the study participants had at least a decade of experience working in the industry and around four-fifths of the women had more than 11 years of work experience. Majority of them reported that they were permanent, registered employees (82%).
- Over three-fifth of the participants reported that they undertook their assigned tasks either sitting/squatting on floors and the majority engaged in fully manual labour. Majority of them are paid on the basis of weight of raw nuts they manage to shell/peel or grade daily (89.1%) and this places them under pressure to process maximum nuts as possible, in order to maximize the remuneration.
- A significant proportion of women reported that their greatest difficulties during working were related to their posture and poor ergonomics (71.6%). Dust, corrosive cashew sap, manual handling of raw nuts, toxic fumes, mosquitoes and heat posed other challenges.
- The factories, particularly the private factories did not have many of the required basic facilities and infrastructure to ensure a safe and dignified workplace, like clean toilets, accessible drinking water, proper dining areas, personal protective

gear like gloves and masks, children's play areas /creches and fire exits /extinguishers.

- Poor wages or earnings disproportionate to the amount of hard work they invested (64.8%), health problems (67.8%) and job insecurity (30.5%) constituted the major problems faced by workers during the past one year.
- Majority of the women (77.5%) reported multiple occupation-related health problems, Musculoskeletal problems – leg/hand/knee pain, back pain, body pain, neck pain and joint pain - predominantly associated with unergonomic working postures posed the most reported occupation related health concern.
- The high proportion of mental health morbidities of anxiety (15.9%) and depression (14.2%) among the workers needs to be urgently prioritized. The high prevalence of workers who reported their perceived quality of life as bad (28.6%) and their perceived health status as unsatisfactory (24.7%) also indicate the general dissatisfaction and unhappiness over their work circumstances and health.
- The significant proportion of non-communicable diseases like hypertension (19.6%), diabetes mellitus (12.3%) and thyroid problems (13.8%) among the workers indicate the presence of determinants like unhealthy diet that need to be addressed. The need for regular monitoring is also underscored by this finding.
- A positive finding, which was highlighted by the participants and other stakeholders, was the high enrolment of the workers in health insurance schemes (87.9%) - ESIS (55.7%) and Ayushman Bharat/Karunya scheme (32.3%). Majority of the workers report that they usually visited either ESI hospital or other government hospitals for their health care needs, indicating a high reliance on the public sector health facilities.
- The relatively high reliance of the workers on public sector health facilities is a silver lining which reflects not only the overall improvements in health care utilization in the state and the strengthening of public sector health facilities, but also the major impact of health insurance schemes like ESIS.

6.2 Policy Recommendations

The issues of women workers engaged in the cashew processing industry have been raised from several quarters at least from the dawn of the new millennium. Despite, many state initiatives over the past two decades to safeguard the workers' rights and protect them, it is clear that the employment and working conditions available for women workers of the cashew processing industry are far from satisfactory. Despite this being a women-dominated industry, there is an absence of a gender lens in the planning and implementing of these interventions, which has led to the neglect of the strategic and practical needs of women workers. The situation has clear implications for the physical and mental health of the workers, clearly presenting the need for targeted policy interventions from the state.

- The study findings clearly suggest the need for factories especially in the private sector to work on the physical and material circumstances of work stations and offer basic facilities, and infrastructure for the workers. This includes facilities and strategies to reduce the physical, chemical, biological, ergonomic and psycho-social exposures, risks and hazards to the workers.

- Both the structure of remuneration based on the weight of processed nuts and the issue of low wages are adding to the financial vulnerability of women workers and there is an urgent need to re-evaluate both. Informalization of labour should be discouraged as far as possible and the concerns of the casual workers should be addressed immediately. The existence of precarity in employment is also suggestive of the need to enhance workers' organization and collective bargaining and to enhance the representation of women cashew workers in leadership positions in trade unions.

- There is an urgent need to introduce participatory ergonomic interventions among the women workers through more comfortable working positions, convenient and healthy work stations with chairs and work desks, introduction of exercises and stretches with which they can continue the work while managing their pain and institution of compulsory work breaks.

• Provision of Personal Protective Equipment in the form of gloves and masks to protect them from potentially hazardous physical and chemical exposures and this should be the responsibility of the management.

• The potentially compromised nutritional status among women, especially due to their hectic working schedules and inability to eat timely, balanced, wholesome meals has been pointed out by several sources. Hence, there should be provisions to ensure that the working women can access decent meals at an affordable rate closer to their work place. This can be co-ordinated with the support of the Kudumbashree mission and Local Self Governments.

• The high proportion of depression and anxiety, psychological distress, perceived poor perceived quality of life and presents the need to create a more positive work environment. This presents the need to identify occupational stress as an important determinant of mental health and expand the scope of state programmes like Ashwasam (addressing depression) to the occupational sector, especially informal sector. Access to depression clinics, counselling and other models of therapy, along with activities for mental health promotion would be beneficial. These include opportunities for group recreational activities like games, music or short spell of ergonomic exercises or other modes of group physical and mental activity that will not only break the monotony of their work but also enhance their creativity.

• Despite the high enrolment in insurance schemes, there are persisting barriers that affect their health care utilization which are mostly related to the nature and structure of their employment. There is a need for work environments to be more conducive to regular health care visits by the workers. This is especially critical considering the high prevalence of NCDs like diabetes mellitus and hypertension and thyroid problems among the workers.

• One way to ensure regular health screening among these workers is by organizing monthly medical camps. One of the top management officials from a public sector corporation had a project in the pipeline for a monthly health screening camp using a mobile medical unit that visits the workers at their work place, which will enhance the chances of prompt diagnosis.

- It is also important to acknowledge that there is a clear need for state initiatives to monitor the working conditions in private cashew factories and ensure that these workers have access to healthy and dignified work places and respectable work. A small team of officials including an Assistant Labour Officer, Health care workers like Junior Public Health Inspector and Junior Public Health Nurse and community workers like ASHA workers can be formulated, who can periodically inspect and report the working conditions and health situations of workers in cashew factories.
- There is a need to acknowledge the fact that the women engaged in the industry are already vulnerable. The predominance of poor, illiterate women from historically marginalized and oppressed social sections in this crisis-ridden industry also creates a conducive environment where the prevalent labour circumstances exploit and accentuate their vulnerabilities and this situation needs to brought to a check at the earliest. There is also need to provide regular occupational health and safety training for the workers to ensure greater safety at work.

- Finally, the labour concerns of workers cannot be addressed without acknowledging and addressing the crisis that has befallen upon the cashew industry as a whole. The closure of factories and the shifting of bases to other states have not only affected the livelihood of thousands of workers, but have also deepened the insecurities of those currently employed in the sector. Hence, the state should urgently intervene to address the root causes of this crisis and constitute policy measures to enhance industrial efficiency. A good starting point would be the introduction of a Cashew Industrial Policy through elaborate discussions and brainstorming sessions with a diverse range of stakeholders including the workers, with clear vision, mission, goals and strategies to revive and boost this once glorious industry of the state.

6.3 Conclusion

The direct role of employment, living and working conditions of people in determining the access to health determinants, health care and consequently on health have been acknowledged since the dawn of this century. The framework proposed by the Commission of Social Determinants of Health also highlights the role of larger socio-economic and policy context and socio-economic positions in determining the health and well-being of millions. The plight of women workers engaged in cashew processing industry in the state of Kerala, clearly underscores the direct role of precarious employment on their health, embodied through sustained intergenerational socio-economic deprivation and a myriad of negative exposures and risks associated with the work. However, the situation also reflects the role of the larger policy context, primarily characterized by the insecurities created by a crisis-ridden cashew processing industry. This situation highlights the potentially critical role of state in securing the rights, health and well being of these workers and mandate urgent state intervention.

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ANNEXURES

1. OBSERVATION CHECKLIST FOR DATA COLLECTORS

Sl No	Checklist	Put tick/write
1.	Whether the Occupational Safety Rules are displayed in the factory	
2.	Number of permanent staff	
3.	Number of contract staff	
4.	Total area of the factory	
5.	Have drinking water facility in each room?	
6	No of toilets	
7	Water pipes/good water facility in the toilet	
8	Frequency of cleaning the toilet per day	
9	No of cleaning staff	
10.	Have any proper dining area	
11	Have proper ventilation in each room	
12.	Have fire exist/ fire extinguisher	
13.	Do the employers wearing/using safety gloves/materials	
14	Any restroom for women employes	
15	Have any kids corner/kindergarten	
16.	Any other	

2. PARTICIPANT INFORMATION SHEET

We are conducting a survey as part of a study on 'Health Status of Women Cashew workers in Kerala, India'. We are collecting information about the health status of women cashew workers from selected cashew factories in Kerala. We would like to ask a few questions to you in this regard. It would take an approximately 20-30 minutes. We request you to consider participating in this study because we feel that you will be able to provide us with information that will help us in understanding the health problems you faced. If you agree it would be really appreciable to spare time for answering questions. I want to assure you that whatever information you provided will be kept strictly confidential. Your name or other information that could identify you will not appear in study record or report.

Your participation in this survey is voluntary, and information provided by you is very valuable for us. You have the right to withdraw at any time from the survey and also to answer/ refuse any question(s). Even after the interview started, you have the right to change your mind about participating and leave at any time.

In case you need more information about the survey, you may contact the PI at the following address:

Excecutive Director

KILE

Thiruvananthapuram

3. INFORMED CONSENT FORM

I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it, and any questions I have asked have been answered to my satisfaction. I consent voluntarily to participate as a subject in this study and understand that I have the right to withdraw from the study at any time without it affecting me in any way. I have been informed that whom should be contacted in case of any need.

Signature/Thumb impression of the respondent :

Name of the respondent :

Date :

Name of the field investigator :

Signature of the field investigator :

Date :

Time :

4 INTERVIEW SCHEDULE

	Individual ID:	**Sl. No**
	District:	**ESI No**
	Municipality/Corporation/Panchayath	
	Place of Residence:1. Rural 2. Urban	
	Factory name and address.	
	Actual strength …….. license strength……..	

I	**Household Characteristics**		
	Questions	**Coding**	
1.	Age of the respondent	……	
2.	Marital status	1. Never married, 2. Currently Married 3. Divorced 4. Separated 5. Widowed	
3.	Age at marriage of the respondent	……..	
4.	Highest level of educational completed	1. No education 2. Primary 3. Upper primary 4. Secondary 5. Higher secondary 6. Degree and above 7. Others specify	
5	Which social group you belongs to	1. General 2. OBC 3. SC 4. ST 5. Others (specify) ……..	
6	What is the colour of the ration card?	1. White 2. Blue 3. Pink 4. Yellow 5. No card	
7.	Have you registered in any health insurance scheme?	1. Yes 2. No	
8	If yes which health insurance scheme (Ask for HI card and write)	1. Ayushman Bharat/karunya health scheme 2. ESIS 3. CGHS 4. SGHS 5. Others specify ……	
9	Monthly income of respondent	……..	

II	Employment details		
10	How many years have you been working in the cashew sector		
11	Nature of employment	1. Permanent 2. Temporary/Casual 3. Contract 4. Trainee 5. Others (specify)	
12	Is the work in this unit a part-time or a full-time work	1. Full time 2. Part-time	
13	In which activity are you engaged in this unit?	1. Shelling 2. Cutting 3. Peeling 4. Grading 5. Packing 6. Steaming 7. Roasting 8. Loading/unloading 9. Drying 10. Supervising 11. Office work 12. Others (specify) ----------	
14	The activity that you are involved has which of the following aspects	1. Fully manual labour 2. Mainly manual labour but supported by Machinery 3. Mainly Machinery but supported by manual labour 4. Others (specify) ----------	
15	Nature of payment of wages	1. Piece rate 2. Time rate 3. Salary 4. Others (specify) ----------	
16	How do you get payment	1. Online 2. Direct 3. Others	
17	How often the wages are paid	1. Daily 2. Weekly 3. Fortnightly 4. Monthly 5. Others (specify) ----------	
18	Are deductions made in your wages after COVID 19?	1. Yes 2. No	
19	Reasons for which deductions are usually made	1. Absence from work 2. Lower output 3. Lower quality/damage 4. Others (specify)	

20	Do you receive any of the following benefits, or are you eligible for the following?	1. ESI 2. PF 3. Gratuity 4. Earned leave 5. Maternity leave 6. Sick leave 7. Accident leave 8. Pension 9. Bonus 10. others specify	
III	**Working condition**		
21	How do you perform your task?	1. Sitting/squatting on the floor 2. Sitting on chair/bench 3. Standing 4. Others (specify)……	
22	Have you experience any of the difficulty in your workspace relating to	1. Dust arising from the shelling and roasting 2. heat generated from the kiln 3. manual handling of the cashew 4. caustic cashew sap 5. toxic fumes (smoke coming out of the kiln) 6. mosquitoes 7. others ----------	
23	Have you facing any of difficulty during work	1. repetitive movements which cause joint pains 2. uncomfortable workplace sitting positions which cause back pains 3. poor body positioning 4. others specify	
24	If you are experiencing any difficulties due to health issues, do you get a shift in job nature?	1. Yes 2. No	
25	Number of rest intervals/breaks?	No----------	
26	Do you skip breaks/rest intervals	1. Yes 2. No	
27	If Yes, why you skip the rest interval?	1. 2. 3.	
28	Whether the workspace has the following?	1. Sufficient, separate and hygienically maintained toilets/latrines for women 2. Sufficient lighting 3. Proper ventilation	

		4. Adequate space in resting room/place 5. Drinking water 6. Satisfactory washing/cleaning facilities 7. Kinder garden/ nursery for children	
29	Have you faced any of the following during the last one year in the workplace?	1. Late payment of wages 2. Had to work when sick 3. Verbal abuse 4. Physical abuse 5. Others specify ----------	
30	If yes What are your problems as a cashew worker?	1. Low wages/earnings 2. Delay in getting wages/payments 3. Health problems 4. Lack of job security 5. Others (specify) ----------	
31	Do there exist any internal complaint committee for sexual harassment in the factory?	1. Yes 2. No	
32	Do you ever face any difficulty due to register any complaint there?	1. Yes 2. No	
33	Do you feel any stress related to your work?	1. Always 2. Moderately 3. Not at all	
34	Do you ever face any issues related to working life balancing	1. Always 2. Moderately 1. Not at all	
35	Do you ever face any difficulty from supervisors/employers, which can affect the effectiveness and efficiency of work?	1. Always 2. Moderately 3. Not at all	
36	Did you face any accident in the workplace (cashew unit) during the last five years?	Accident: 1. Yes, 2. No Injury: 1.Yes 2. No	
37	Are you a member of Cashew Workers Welfare Fund Board?	1. Yes 2. No	
38	For what all purposes you have received support from the Welfare fund? **More than one response possible**	1. Pension 2. Financial aid for education of children 3. Financial aid for marriage of daughter 4. Financial aid for building house 5. Financial aid for the maintenance of house 6. To meet health-related expenses 7. Others (specify)	

IV	General health condition		
39	What are the other Physical discomfort you have?	1. Body pain 2. Leg/hand/knee Pain 3. Back pain 4. Joint pain 5. Neck pain 6. Headache 7. Cough 8. Skin disease 9. Sneezing 10. Urinary Infection 11. Piles 12. Allergy 13. Other diseases (specify) …	
40	During the last 12 months have you had any of the following health problems	1. Tuberculosis 2. Hepatitis 3. Heart disease 4. Hypertension 5. Diabetics 6. Anaemia 7. Asthma/Bronchitis 8. Thyroid problem 9. Piles 10. Varicose problem 11. Epilepsy 12. Cancer 13. HIV 14. Cardiovascular disease 15. Arthritis 16. Others ----------	Treatment
41	Whom do you consult usually?	1. Doctor in the ESI dispensary/Hospital 2. Other government hospitals 3. Private doctors/hospital 4. Medical shop 5. Others (specify	
42	Why do you not depend on the ESI facilities?	1. not eligible to avail ESI facility 2. The ESI facility is far off 3. Not satisfied with the ESI Facility 4. Private doctors are better 5. Private facility is more convenient 6. I have to pay money in ESI 7. Others (specify)	

43	Do you face any problems in accessing health care? If yes What specify	1. Yes 2. No If yes specify	
44	From where you find money for health care	1. Relatives/friends 2. Savings 3. Private money renters 4. Others	
45	If you are working in the shelling, do you have any difficulty If yes, please specify	1. Yes 2. No	
46	How much water do you drink every day?	No of glass---------	
47	1. Height 2. Weight	…….. ……	
V	**Reproductive health**		
48	Do you have any menstrual problem(in last 3 months)	1. No period 2. Irregular periods 3. Painful periods 4. Prolonged bleeding 5. Scanty bleeding 6. Inter menstrual bleeding 7. Blood clots 8. Others specify…….	
49	Have you ever undergone treatment for these menstrual problems?	1. Yes 2. No	
50	What absorbent material do you use during menstruation?	1. Commercially made sanitary pad 2. Napkin (soft paper) 3. Rag made pad 4. Cloth 5. Other(specify)	
51	How often do you change the cloth/pad in a day?	1. Three and more 2. Once 3. Twice	
52	Where do you dispose, your pads at the workplace?	1. Dustbin 2. Drain 3. Toilet 4. Open field 5. Other (specify)_____	
53	Have you had any of the reproductive problems?	1. Irregular bleeding from the vagina or uterus 2. Ovarian cysts or fibroids 3. Abnormal genital discharge 4. Genital sores or ulcers 5. Polycystic ovarian syndrome 6. Fungal infections of the vagina 7. Uterus prolapsed 8. Any other specify	

54	Did you seek any kind of advice or treatment for the above problems		1. Yes 2. No		
55	Why do you not seek treatment?				
VI	**Pregnancy history**				
56	Have you ever become pregnant				
57	Are you pregnant now?		1. Yes 2. No		
58	How many times you ever been pregnant (counting all pregnancies regardless of the outcomes)?		Specify……		
65 9	Details of Pregnancy				
NO	Outcomes *[(1) Induced abortion (2) Spontaneous abortion (3) Stillbirth (4) live birth*]	Age of the mother at the time of pregnancies	Type of delivery *{1 Normal, 2 C-section, 3 Others specify }*	Place of delivery *{1.Public,2 .private3. home}*	*Do you get benefit of JSY/JSSK scheme?1 yes 2… no If no, why?*
1					
2					
3					
4					
60	*If the women had a live birth* Number of children alive now?				
61	The physical activity currently you engaged in i. Exercise ii. Yog iii. Walking iv. Any other specify		How many days in a week i. ii iii iv	Time i. ii iii iv	
62	Which contraceptive method are you using?		1. Female sterilization 2. male sterilization 3. IUD/PPIUD 4. Pill 5. Condom 6. Others		
63	Does your family members use any of these		1. Alcohol 2. Cigarette/beedi 3. Pan masala/ any other chewing tobacco 4. Others specify		
64	Do you currently use any of these		1. Alcohol 2. Cigarette/beedi 3. Pan masala/ any other chewing tobacco 4. Others specify		

65	How do you measure the quality of your life	1. Too bad 2. Bad 3. Neither bad nor good 4. Good 5. Too good 6. No opinion	
66	How satisfied are you with your health	1. Very much satisfied 2. Satisfied 3. Neither satisfied nor unsatisfied 4. Unsatisfied 5. Very much unsatisfied 6. No opinion	
VII	**Debt**		
67	Are you a member of Kudumbasree?	1. Yes 2. 2. No	
68	Do you have any type or kind of debt	1. Yes 2. no	
69	What is the reason for the debt	1. marriage of son/daughter 2. house making 3. health 4. daily expense 5. others	
70	How much amount of debt you have		
71	From where you have debt 1. Bank a. Govt b. Private 2. Private money lenders a. Daily b. Weekly c. Monthly 3. Friends/relatives 4. Kudumbasree 5. Others	…… …… …….. …….. …….. …….. …….. ……..	
72.	Source of clearing of debt		
73.	Over the last two weeks, how often have you been bothered by feeling nervous, anxious or on edge	1. not at all 2. several days 3. more than half the day 4. nearly every day	
74	Over the last two weeks, how often have you been bothered by Not being able to stop or control worrying	1. not at all 2. several days 3. more than half the day 4. nearly every day	
75	Over the last two weeks, how often have you been bothered by little interest or pleasure in doing things feeling down, depressed, or hopeless	1. not at all 2. several days 3. more than half the day 4. nearly every day	

76	Over the last two weeks, how often have you been bothered by feeling down, depressed, or hopeless	1. not at all 2. several days 3. more than half the day 4. nearly every day	
77	Are you vegetarian or non vegetarian	1. vegetarian 2. non vegetarian	
78.	How many days in a week you eat vegetables		
79	How many days in a week you eat fruits		

5. Schedule to conduct In-Depth Interviews among women currently employed in the Cashew Processing Industry of Kerala

Participant ID: Place: Date:

Time of commencement of the interview:

1. Could you tell me a bit about yourself? (*Probes:*Your age, educational background, family, place of residence, where are you working presently, are you the sole earning member in the family, how many dependents in the family, domestic and caregiving responsibilities as a woman and so on)
2. Could you tell me a bit about your experience working in the cashew processing industry? (*Probes:*How long have you been employed in the industry? Have you always worked in this industry? What made you shift to this industry? What kind of work you do in the cashew processing? When do you start working in a day? When does the work end? Are the wages regular? Major challenges related to this line of work? Is this work better than the work you did before this? How long do you plan to work in this industry? Do you have other options in terms of work opportunities?)
3. Are there any health issues that you face currently? Are you presently under medication/treatment for any health condition? (*Probes:*What is the nature of health issue? How long have you been dealing with this health issue? When did you start treatment? Where are you getting treated? Are the medications regular? Is the health problem under control? Are there any additional health issues that you have not yet sought treatment for? - aches, pains, allergies, burns, breathlessness, itching and so on)
4. Sometimes the difficulties related to one's work can have an impact on one's health. For instance, people who have to stand for long hours as part of their work can have pain or swelling or other issues on their legs. Have you had any such experience? Do you think the nature of your work (current or past) has in anyway contributed to your health issues? If yes, how? (*Probes:*What is the exact nature of her work and how is it contributing to her health? Associations between sitting, squatting, less breaks, exposure to heat, cashew kernel oil etc with aches, pains, allergies, burns, breathlessness, itching and so on).

5. Now let us talk about the issues, if any, related to seeking health care. What challenges are there related to seeking health care, if any? (*Probes:*When you experience health problems, which facility/facilities or provider/providers do you visit? Why do you visit these specific facilities /providers? What about the expenses related to health care – transport, doctors' fees, medicines – how do you manage? Do you have ESI card? Usually, which day do you prefer to visit a health care facility and what time? Do you have difficulty getting off from work to go to hospitals?What about paid leave? Remember the last experience of visiting a health care facility – how was it? What challenges did you face? Doctors'attitude, friendly/unfriendly clinical hours, informal payments/bribes and delay in treatment – do these barriers matter?).

6. Did you have an experience in the past two years where you could not work due to health issues? How did you manage? If that has happened, what was the response from the authorities at your workplace? Do you know about such an incident happening to anyone in your contact? What was their experience?

7. Okay, so we have spoken about your work, its impact on your health and difficulties in seeking health care. Do you have any solutions to address these problems? How can we make the experience of the women working in cashew processing industry better?

8. Is there anything else that you would like to add to this conversation?

Thank you for talking to me!

Time at which the interview ends:

6. Schedule to conduct In-Depth Interviews among trade union leaders/ activists in workers' collectives engaged in the Cashew Processing Industry of Kerala

Participant ID: Place: Date:

Time of commencement of the interview:

1. Could you tell me a bit about the experience of workers engaged in the cashew processing industry? (Major challenges related to this line of work? Are the wages regular? Work timings? Job security? In the context of current crisis and pandemic?)
2. How about the situation of the women workers? The nature of work done by men and women are different and the challenges may also be different. What are your reflections on this?
3. We know that a majority of the companies in the state are in the private sector? Do you think there is any difference between those working in the public and private sectors with regard to their working conditions and rights and protection as workers? Could you elaborate?
4. Are there specific health concerns observed among workers in the cashew processing industry? Sometimes the difficulties related to one's work can have an impact on one's health. For instance, people who have to stand for long hours as part of their work can have pain or swelling or other issues on their legs. Do you think the nature of work in the industry contribute to health issues of the workers? If yes, how? (What is the exact nature of work and how is it contributing to health? Associations between sitting, squatting, less breaks, exposure to heat, cashew kernel oil etc with aches, pains, allergies, burns, itching and so on).
5. Now let us talk about the issues, if any, related to seeking health care. What kind of barriers exist, if any, for the workers to access health care? (Do all workers, both formally and informally employed in informal and formal sectors, working both in public and private companies have ESI cards? Do they have paid leaves? Do they have access to any kind of social security schemes – life insurance, accident cover etc?).
6. As an industry dominated by women workers, do you think women workers have adequate representation in trade unions, especially in leadership positions? How do you come to know about the issues faced by workers, particularly women workers in the industry?
7. Okay, so we have spoken about the working conditions, its impact on the workers' health and difficulties in seeking health care. Do you have any solutions to address these problems? How can we make the experience of all the women working in cashew processing industry better?Based on our rich experience, what are your thoughts on separate and specific initiatives to address the issues of women workers?
8. Is there anything else that you would like to add to this conversation?

Thank you for talking to me!

Time at which the interview ends:

KERALA INSTITUTE OF LABOUR AND EMPLOYMENT (KILE)

HEALTH STATUS OF WOMEN CASHEW WORKERS IN KERALA